The Builder.

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WE have again before us a number of books, connected with architecture, engineering, and construction, concerning which our readers should know something. When we last put together a few general remarks on works then in our hands, it happened that those works were collections of examples, and we found it necessary, without undervaluing the class of books alluded to, or withholding the praise which was justly due to those particular specimens themselves, to comment on the great and absorbing rage for *imitation* which prevails, the rapidity with which books of examples are multiplied, and the danger which environs those, if such there be, who would deviate from precedent, and endeavour to make the past benefit the present, rather than the present conform and yield to the past. "The artist, essentially a creator," it was said, "is turned into a measurer and caster: seeking vainly in the past what the present requires and the future will expect."

The books now before us chiefly relate, by coincidence, rather to principles, and some of them will call hereafter for more lengthened examination than we can give in the course of this running commentary. Foremost amongst them, as the result of long and patient inquiry, stands the second part of "Ancient Gothic Churches, their Proportions and Chromatics," by Mr. W. P. Griffith,* In the first part of this curious work, which our readers will remember we noticed some time since,† the author stated his intention of issuing "from time to time, similar parts, agitating, defending, and promulgating the deeply interesting subject of architectural construction by geometry." This is the first fulfilment of the pledge, and those who examine it will be obliged to admit that in it, Mr. Griffith has very greatly advanced the subject. Our own opinion that the architectural productions of the middle ages were erected on set principles,—that caprice had no share in the general arrangement, and little, if any, even in the ornamentation of Gothic structures,—and that Geometry was the foundation of mediæval art,—has been long known to our readers, and is now becoming generally received as an established fact.

"In the early periods," says Mr. Griffith, "the geometry of squares and circles was undisguised; but when it was applied to the distribution of foliage, its apparent harshness was cloaked by the leaves and flowers; and although its utility in equally distributing the parts was the same, yet a greater elegance was effected by the introduction of foliage. In Brandon's Analysis (Examples?) of Gothic Architecture, Section 1, *Norman*, plate 2, the label to the doorway is composed of an ornament formed of a *circle with a square inscribed*; the diagonals and diameters having been inserted, small circular ornaments are struck from points produced by the diameters on the sides of the square. In this may be traced the germ of the future tetrafoil."

Although regular geometrical figures proportioned the spaces for flowers, foliage, and other decorations, when these were filled in, the external lines were removed, no straight lines remain, and to the investigator alone is it known that they have been thus proportioned. "All the beauty," says our author, "for which Greek and Gothic architecture, and all pure architecture, is famed, we attribute to the pure geometry of the Greeks. Modern mathematics will not do much towards improving the architecture of the ancients. It may confuse it; it will not surpass it. But the ancient geometry of regular figures is not worn out, neither has it been superseded; and whilst we possess it, and use it, we may yet realize many beautiful buildings. There seems to be an innate feeling in man to dislike that which is simple. He would much sooner waste years in searching in the dark, even if he never found any thing, than acknowledge that any beauty can be created by simple means."

Of the general arrangement of ancient churches on a geometrical system, several extraordinary examples are given, in addition to those which have preceded; thus Preston Church, near Faversham, is shewn to be founded on an equilateral triangle, and regulated by the subdivisions of this to a remarkable extent. This structure, like many other small country churches, has but one aisle, and in this case the primary line or base of the equilateral triangle must be set out the same as if there were two aisles,—the perfect church being the object to be ultimately attained, although built with but one aisle in the first instance. In the case of Faversham Church, this line is found to be 50 feet, and by this the several portions of the church are proportioned. The mode of proceeding, so well as we can explain it without a diagram, he shews to have been this. A circle was inscribed around the first equilateral triangle, which had the west wall for base, and a reversed triangle was then drawn within the circle, forming the conjoint equilateral triangle so well known in masonry. The extremities of the circle, at the sides, are found to give the projection of the buttresses, and a line drawn parallel to the west wall at the eastern extremity of the circle, gives the termination of the south aisle, and one side of the tower. The altitude of the triangle which has a base of 50 feet, is 43·9: adding to this one foot, in consequence of the west wall of aisle being one foot less in thickness than the west wall of nave, makes 44 feet 9 inches, which is exactly what the length of the aisle is found to be. Inserting two conjoint equilateral triangles in the hexagon, produced by the first formed triangles, divides the figure into what our author terms units or numbers, of which the base of the triangle has six, each 8 feet 4 inches by 7 feet 3½ inches in height. A repetition eastward of the conjoint triangles within a circle, marks, by the eastern extremity of the circle, the end of the chancel, and by the base of one of the triangles, the chancel arch. The length of the nave is 8 of the units before mentioned; and the length of the chancel 6 units, or 43 feet 9 inches. The triangles, according to our author, also decide the width of the opening of the chancel arch, the width of the windows, &c.

In Tong Church, Salop, which has two aisles, a similar proceeding gives similar results: in this the base is 52 feet. The extremity of the circumscribing circle gives the termination of the nave and one side of the tower, which here stands between the nave and the chancel; and a repetition of the triangles and circle gives the eastern termination of the chancel, and the line of the chancel arch very nearly. The position of the columns which separate the nave from the aisles is also marked out by the intersections of the triangles.

The system may have been simpler than is here supposed, and may not have been carried so far, but that the proportions of these churches were arranged on *some* geometrical system, is as certain as that a watch must have had a maker. Nor is it at all destructive of the theory to point out that, in some cases, the determining lines come in the middle of the walls, and at others outside them; such slight deviations may be only apparently such (explainable when the matter is more fully comprehended), or may be owing to the operatives.

In Croydon Church, where the given line, or width of the church, is 80 feet, it is divided into units, each having for its base 8 feet, and its altitude 7 feet, and our author states, that from centre to centre of the columns dividing nave from aisles, are four units, equal to 32 feet; three units give the width of the chancel, equal to 24 feet; the south porch is contained in four units, the north porch in eight. The altitude of eleven units gives the length of the nave and aisles; the length of the chancel is marked out by eight units, and the length of the chapels, or chancel aisles, including the east wall, by five units;—sufficiently curious, the most sceptical will surely admit.

Salisbury Cathedral is very singularly developed by the square, and in the *sections* of some of the cathedrals the existence of a system is made evident beyond a doubt. We may not dwell longer, however, on this work, except to congratulate the author on the satisfactory advance he has made.

It is an easy and natural progression from this endeavour to make clear the geometrical system of the mediæval architects, to the new edition of Rickman's "Attempt to Discriminate the Styles of Architecture in England," which Mr. Parker* has just now published in a form which would have gladdened the heart of its author if he had been alive. Very little additional matter has been added; for, as the editor observes, notwithstanding the numerous works which have appeared within the last five or six years, it is surprising how very little real information has been added to that which Mr. Rickman collected and digested. What the book wanted was proper pictorial illustration, and this it has now received in a profuse and extraordinary degree. A few of the illustrations are from other works, but the majority are from original drawings, executed expressly for the purpose, and have the disastrous effect of rendering all former versions of the work comparatively worthless. Those who have Rickman, equally with those who have not, must buy the present edition. We must take one exception to the illustrations,—an exception which applies to another work from the same publisher,—and that is as to the unsatisfactory manner in which the illustrations which relate to classic architecture are executed, as compared with those of the mediæval period. While the latter are clear, precise, sparkling, and beautiful, the former are tame, coarse, and incorrect. We hope Mr. Parker will remedy this in the next edition, and in the meantime commend it

* Published by the author, 9, St. John's-square.

† See p. 393, Vol. V.

* 377, Strand; and Broad-street, Oxford.

as absolutely necessary for every architectural student.

An author whose work has just now reached a second edition and is before us,—"Ancient and Modern Art, Historical and Critical," by George Cleghorn,*—says, "If the practice of our modern British architecture is corrupt, vacillating, and unsatisfactory, the theories and doctrines inculcated in a great portion of the leading journals and treatises, published within the last twenty-five years, are characterised by the same bad taste, affectation, and inconsistency." We must take care, therefore, how we praise. The same polite writer says,—

"A great proportion of our British architecture, within the last half century, consists of imitations of the Gothic, both ecclesiastical and castellated. They are generally in the worst taste—meagre, false, and affected—adhering to no style or period—having no statuary, and destitute of the characteristic features and accessories of the ancient structures. The modern Gothic church is comparatively high, square, and stunted in length. A greater length, with a projecting chancel and semi-octagonal absis, would not only be more graceful, but supply a convenient recess for the altar."

He has evidently been out of the world for a time. And elsewhere he says,—

"While our English architects and architectural writers have for more than a quarter of a century been indulging in abstract and barren speculations on the perfection and superiority of Grecian architecture, which they never dream of reducing to practice, except in detached portions and on a pitiful scale; vituperating the Roman and Italian, which they do not scruple to borrow, only to disfigure and corrupt; eulogising the Egyptian, and recommending its modern adaptation in brick and stucco for the most plebeian and degrading purposes; indulging in every kind of dogmatism and paradox in their mystified discussions and absurd controversies;—the great continental nations have been quietly and steadily improving their taste, and raising magnificent and lasting monuments of architecture, decorated with sculpture and painting, well calculated to perpetuate their fame and achievements to a distant posterity."

Such an intolerant and captious spirit as is displayed in this book should be accompanied by greater knowledge than is displayed in the intimation that the new Houses of Parliament are in the *Elizabethan* style (p. 172), or in his attempt to maintain that the Pointed style originated from the imitation of groves of trees, in which the northern nations worshipped, and wickerwork constructions. Other theories are not to be listened to,—"the sylvan hypothesis affords the only rational solution" ("motley's your only wear"). It seems quite surprising that any man who has studied the subject should, in these days, be found to take up this long-ago exploded fancy, and gravely write:—

"To deny that the purest ecclesiastical Gothic exhibits the most striking similitude to the interlacing of groves and trees, as well as to the construction of wickerwork, were as unreasonable as to shut our eyes to the marked analogy between the Grecian Doric temple and the wooden hut. Indeed, the whole composition and details of a Gothic cathedral—the naves, aisles, clustered pillars, groining, and ramifications, cross springers of the vaults and roof, the transoms, mullions, tracery, and minute ornaments—all point to the same prototype. What is a great part of its sculpture and decorations, its trefoils, quatrefoils, cinqfoils, its finials, crockets, featherings, cusps, foliage, and fretwork, but an imitation, more or less free, of plants, flowers, fruits, and vegetable nature? What are its stained glass windows and oriels, but an imitation of the harmonious and chastened gleams of sunshine passing through the branches and openings of the richly variegated foliage."

Contradiction is not necessary; and then to find this same gentleman turning up his nose and not merely pooh-poohing every body and every thing connected with architecture in England, but throwing all sorts of abuse at them, is really too good.

Enough of him for the present, and let us look at a quiet little work by Henry Shaw, F.S.A., entitled "A Booke of Sundry Draughtes, principaly serving for Glasiers; and not impertinent for Plasterers and Gardeners, besides sundry other Professions,"* and which professes to be almost wholly copied from a work originally "Printed in Shoolane, at the Sign of the Falcon, by Walter Dight, in 1615." It consists of a large number of forms for glazing (certainly "not impertinent for plasterers," but suggestive), and will be found very useful. We had arranged a collection of such forms, intending to engrave them for our pages, affording proof that we thought some such publication as this was needed. We agree with Master Gidde, the author of the original work, when he says,—

"Although it may seem to those expert in glazing that these draughts are needless, being so plaine and in use, not deserving in this sort to be published, yet notwithstanding here I doe in friendly courtesie admonish that it is most needful, giving choice to the builder both for price and draught of work, which by no understanding can the glazier so sensibly demonstrate his feat as by having his examples of draught, for by such show the builder shall understand what to make choice of, for whose care and furtherance only I have published this notice of glazing, knowing the expert master is not unfurnished of these usual draughts, though each workman have not all of them."

And here we will end for a time.

## ON ARCHITECTURAL EXHIBITIONS.

THREE weeks have elapsed since a critical sketch of the contents of the Architectural room at the Royal Academy was laid before the readers of THE BUILDER, coupled with a sincere expression of regret at the inefficiency of the collection with reference to the purposes for which it is offered to public notice; an inefficiency which evidently resulted from the just and frequently-urged claims of the profession to attention being unheeded by the Academy.

During this interval many letters have been received on the subject, the writers of which seem deeply to regret their apparently helpless position, and, knowing that they express the general sentiment of the majority of the profession, it seems desirable seriously and dispassionately to consider the subject—to settle its real importance—to point out the sources of the evils at present connected with it, and, if possible, to suggest a remedy.

The subject will be fully discussed if the following queries can be satisfactorily answered. Of what importance to the public and to the professors of the art is an improvement in architectural taste? To what extent is an exhibition of designs for buildings calculated to conduce to such improvement? What is the present position of our national exhibition of architectural designs, and what the cause and consequences of that position? To whom should the public and the profession look for a remedy, and what should that remedy be?

First, then, of what importance to the public and to the professors of art is an improvement in architectural taste? If we consider man in his social character, influenced to the extent he undoubtedly is by the force of example and habit (that is, by what he continually sees, animate or inanimate, or by what is continually acting upon some other of his senses) and if we allow that the contemplation of visible beauty with an understanding eye, is elevating, improving, and delightful—that visible beauty may be embodied in buildings—and that designing and appreciating such beauty is architectural taste, it must follow that an improvement in that taste is of considerable importance. The social character of man induces him to live in the immediate vicinity of his species, and consequently buildings are erected, cathedrals, churches, palaces, theatres, mansions, monuments, bridges, streets, shops, houses, cottages—all are the results of the gratification of this desire in mankind to herd together. We live in buildings, we walk out, we see buildings, we transact our business in buildings, we worship in buildings, we amuse ourselves in buildings. Look where we will, at home or abroad, in whatever direction we turn, some developement of some idea in building, is almost sure to meet our eyes; the visible beauty or the visible ugliness of building, is operating on us all every day, indeed, almost every hour of our lives: what then may not fairly be expected from an improvement in architectural taste. Let us trace its workings.

A love for the beautiful becoming general, the means for gratifying it become general, that is, the demand being created, invention is taxed. Ugliness is known in its true character of ignorance. Beauty is recognised as wisdom: education thus becomes worth acquiring, and is acquired. Science offers the right hand of friendship to labour, and relieves her of half the burden; material becomes a universal language for the expression of thought; competition and the desire for progress successfully combat with sameness and apathy; the professor rises in the public estimation (a consequence only to be ensured by his satisfying a generally felt public want); the minor arts flourish;—it being a fact, however little recognised, that the success of the mason, modeller carver, gilder, decorator, paper-hanger, and of numerous other trades and occupations, is always in exact ratio to the development of architectural taste in the public mind; and withal, though the time expended in execution gradually diminishes, the number of labourers is ever on the increase, since a gratified love for beauty, gaining vigour by the food afforded it, continually enlists new worshippers at its shrine. It is only from a contemplation of these truths in their various bearings, that we can arrive at any proper sense of the importance of a general improvement in architectural taste.

We have next to consider to what extent an exhibition of designs for buildings is calculated to conduce to such an improvement.

It will hardly be denied that improvements in, and additions to, the appliances and delights of men, result not so much from a demand being, in the first instance, actually made for the supply of recognised wants, but from its being an honourable and profitable exercise for the ingenuity and energies of individuals, first, to discover these wants, then to invent the means of gratifying them, and, subsequently, to take judicious steps for proving to the public that such wants really exist, and are worthy of attention; and we think it may be shewn that an exhibition of designs is one of the most natural and influential steps that can be taken by the professors of an art, in their endeavours thus to act upon the public mind. In the first place, it courts attention, and tacitly acknowledges the importance of public opinion, while it boldly asserts its own claims to notice. If a true exposition, it gives a good idea of the extent to which the positive appreciation of the art has arrived at that time; and, reacting by the force of example, leaves a latent desire in its beholders to do as they there see others have done and are doing. It at once induces in the architecturally uneducated who view it, a frame of mind and train of thought, with regard to its subjects, more certain to be attended with a satisfactory result than any that is likely to be engendered by the mere existence of the individuals in the vicinity of even the most splendid practical examples, because, in the latter position, a dull feeling of incapability and difficulty prevents them from exerting the power of reflective contemplation naturally possessed by almost all: whereas, in the former, a momentum sufficient to overcome the inertia is given, by the supply of a convenient and easy means for gratifying that spirit of criticism and comparison of merit that would continue to lie dormant, without some

* Blackwood and Sons, Edinburgh and London.

* London, William Pickering, 1848.

such gentle though active stimulus. Such an exhibition affords at one view a variety of examples of structures, many of them similar in purpose, and is thus calculated to achieve the important end of establishing in each mind, more or less, the principle of a decided preference. Each beholder distinctly feels and exerts the power of liking one design better than another, and derives pleasure from the exercise of that power; thus realizing a capital or stock in hand of critical taste, that goes far to induce him to avail himself of the opportunities that afterwards continually lie open to him for improving it.

This we conceive to be the *modus operandi* on an uneducated mind: to the artistically educated man such a collection needs little to recommend it. It is to him a luxurious studio, where he finds the materials for increasing his previously acquired store of knowledge, and for perfecting his taste in all its varied details. Again, from the facilities it affords he can clearly mark the advancement of men of established talent,—he can search out and perhaps form the idea of encouraging genius hitherto unrecognised,—and he can rejoice in the progress of the art he loves in districts remote from his own sphere of action, and in the minds of individuals to whom his personal influence can never be extended. A collection of this kind also enables the foreigner of taste, who visits our shores, to take at once a clear and comprehensive view of the general state of architecture throughout the kingdom. By well-known and eminent architects it ought to be supported with spirit and vigour, affording, as it does, an important means for increasing their fame, and an arena in which they can incontestibly prove, by comparison, the justness of their claims to the honourable position they occupy. To the local and junior professors of the art it is invaluable; for through such means alone can they hope to introduce themselves to the notice of the general public, and by shewing what they have done, and can do, establish their claims to attention on a fair and proper basis. These are some of the advantages that a national exhibition is calculated to confer upon the public and the professor.

Of the other heads of the inquiry we shall speak hereafter.

## FALSE PUBLIC DOCUMENTS.

WEEK after week and month after month, for some years past, we have been looking for the alteration of the written lists of regulations put up at the several entrances to the parks, which are practical untruths. They are signed, "By command of *His* Majesty, *Augustus Frederick*, ranger," and give the same unpleasant impression which is produced when you observe that the almanac of the previous year has not been changed in a solicitor's office,—a sure sign that things are going badly, and that time is of little consequence there.

These rules are the current regulations of the day, and have their authority from *her* Majesty (GOD bless her!) and the present ranger. Do, pray, therefore, excellent Lord Morpeth, let the office of Woods' painter set matters straight, and give a business-like and truthful appearance to these boards, which at present lie as they stand (so *very* unlike some other Boards), and you will thus remove an eyesore and a reproach, and oblige many besides your lordship's admirer,

"THE BUILDER."

KENSINGTON.—Sir: You have recently spoken of Kensington,—do, pray, remark again on the want of a proper gate-entrance to the Queen's-road, similar to the one at Bayswater, and tell them to pull down that rookery called Jenning's-buildings, and form a nice street through it, with private houses on both sides of the way; and where the "Crown" public-house was burnt down, to pull the remainder of the houses down as far as the National School, with the houses opposite, in order to widen the road at that part, and to throw the houses back. As for the new church they intend to build down Victoria-road, although Mr. Vallotton has given them the site for it, they seem to sleep over it.

A CONSTANT READER.

## ON GUTTERS, FLATS, AND LEAD WORK.

PROFESSOR DONALDSON'S LECTURES AT THE LONDON UNIVERSITY.

IN connection with our remarks on the importance of the study of construction, the inattention to it displayed in too many cases, and our suggestion of such aids as would render the acquirement of professional knowledge a matter of less difficulty than it now is, it would be wrong were we to omit reference to the eminent labours in this respect of Professor Hosking at King's College, and Professor Donaldson at the London University, and not urge on our younger readers the advantage which many of them would derive, at comparatively small cost, from joining the classes of one of them. Confining ourselves on the present occasion to the labours of the latter gentleman, we may state that he gives every year from 100 to 120 lectures, partly on architecture as an art, partly as a constructive science. In illustration of the first, beyond a large collection of diagrams and drawings, the pupils are taken to the buildings of chief importance in the metropolis, where their merits of design and execution are pointed out; and the course on construction is elucidated by practical experiments. To convey a better idea of the sort of information which is conveyed, we give notes of the professor's last lecture, which related to gutters, flats, and lead work.

*Gutters.*—After speaking of eaves-gutters, Mr. Donaldson said,—To obviate their defects, trough or parallel gutters are constructed, and they are formed by letting the feet of the common rafters fall on a deepish pole-plate, which forms one side of the gutter, whence the name parallel gutters. The gutters, if next a lofty parapet, should be at least 15 inches wide, but if between two sloping roofs of moderate size, 12 inches will suffice. The fall and drips may be less than in the former gutters, but it is as well to get the fall as rapid as possible, and the drips as deep as circumstances will allow.

At the lowest part of the gutters a cistern must be formed the full width of the gutter, about 18 inches or 2 feet long, and 8 or 10 inches deep, at the bottom of which should be a pipe some 4 or 6 inches in diameter, as the case may require, which pipe either goes directly into the main stack of rain-water pipes, if immediately under, or else leads the water into the cistern head at the top of the stack of rain-water pipes outside the building. It is to be observed that it is necessary to prevent the obstructions of the top of these pipes, by leaves or other substances. For this purpose there is placed over the pipes a loose lead circular cauliflower head, perforated with numerous holes, about half an inch diameter, the head itself some 9 or 12 inches in diameter; or else there is a grating at the top of the cistern, which however is likely to be choked. In fact, the great object must be to get the gutters to relieve themselves of the water as soon as possible, that it may not overflow at the drips or joints, or by rising over the lead where turned up. Another good expedient is to have metal or wood gratings all through the gutters, strong enough to bear a man's weight. This prevents the obstruction of gutters, by the snow sliding off in large masses from the roof, and protects the lead from injury by nails in the shoes or boots of those sent to repair or cleanse the gutters. If shovels be used in the gutters, or on the flats, they should be of wood. The heads at the top of the rain-water pipes should be of metal, either lead or iron, sufficiently capacious, and provided with waste shoots about 1 or 2 inches in diameter; so that, in case of the head becoming choked, the water may flow off through these shoots.

We find in the Gothic buildings, that the stacks of rain-water piping were of lead, sometimes of stone, and that the cornices and strings frequently profiled round them. Often there were no stacks of pipe, but the waters were discharged directly from the gutters, by greatly projecting stone tubes, called gurgoils, covered with odd capricious figures of animals and birds, nay sometimes of men. They threw the water off to a great distance, but in case of a driving rain, were very unavailing to protect the wall on the windward side of a building, as the force of the wind would blow it on the walls, and completely saturate them. Care should be taken to have the stacks of pipes as straight as possible, without any bends, or if there must be some angles, they should be rendered as obtuse and gradual as possible. At the bottom of the stack there should always be a shoe to break the force of the descending water, and turn the current into the mouth of the drain into which it is discharged. All the joints must be made as secure as possible, and to prevent overflow or dripping, they should be stopped with oakum, well driven in. It is evident that in channels for water, there should be as few angles as possible, either in the section of the channel itself, or in the line or direction which it follows. Now, it is very frequently necessary to lead a gutter from one point to another; in this case, it is as well to construct the angle with a circular turn: this less impedes the currents of water, prevents the accumulations of leaves, dirt, and other matters, and leaves the watercourse unobstructed.

*Lead Flats.*—As regards lead flats, they should always be formed with well-seasoned timber, as their position renders them most liable to the heating action of the sun, which is very trying to unseasoned timber. They should be laid with a sharpish fall, not less than 3 in. in 10 ft.; the rafters or joists should be laid transversely, and the boarding in the direction of the fall, as otherwise, in case of shrinkage and twisting, the rising edges of the boards would form so many ledges to prevent the water running off, and nothing is more detrimental or trying to lead than settlements of water, which, evaporating, tend to decompose the lead. It is better for lead to be always free or always covered with water, than alternately either one or the other. The boards should be of equal thickness, and the edges shot, to prevent open or irregular joints.

*Lead.*—The best lead is the purest, free from all foreign matters. It is manufactured for use in two ways, either milled or cast. In the first case it is passed through a mill in two cylinders, which secures its being of equal thickness, or it is molten and cast in sand, from which inequality of the thickness sometimes comes, and sand-flaws will be produced, which, however, can be detected by careful examination. None but the best lead can be cast, but an inferior and mixed quality can easily be passed through the mill. Hence each sort has its advocates. The even thickness and the smoother surface, which offers less friction to the water, outweighing every other consideration with some, and others preferring the cast, on the ground of the purer quality thereby ensured. But although cast lead may be safely used for parts where great weight is required, as in gutters and cisterns, in which cases a slight inequality of substance is not so material, yet in parts where lighter lead is used, as of 5 lbs. or under, in flashings, hips, and ridges, there the milled lead must be employed, in order to ensure that no parts be under the standard thickness. In buildings of the very first class, the flats should be of 9 lbs. lead, the gutters 8 lbs., the hips and ridges 6 lbs., the flashings 4 or 5 lbs. In all other buildings they should not properly be more than 1 lb. less.

The sun acts so powerfully in expanding, and the cold in contracting lead, that it is of the utmost importance to lay the sheets as loose as possible, in order to afford them play, or they will crack, and no other fastenings must be used than those absolutely required to keep the lead in its place. Except in cisterns, it should never be soldered. The sheets should not exceed 3 feet in width, nor be in greater lengths than 16 ft. Consequently, as the sheets supplied by the lead merchant are about 6 ft. wide and 16 ft. or 17 ft. long, they may be cut in half.

On leaded roofs or flats, the side joints are formed by laying wooden rolls about 1 in. or 1½ in. diameter, round which the sheets are turned at the side one over the other; and this is usually sufficient to prevent the wet from rising over the roll and under the lead; when the inclination is very rapid, lead-headed nails are driven through the lead into the roll to secure the sheets, and then the lead is soldered over to prevent the wet entering, but they soon get loose. In old roofs the junction is formed by merely turning up the edges one over the other, without a roll, and hammering them together.

It is to be observed that the weight of the lead must be somewhat regulated by the greater or less exposure of the roof; for if in

exposed situation, and subject to severe storms and gusts of wind, heavier lead is required to resist the blasts, or the hips and ridges will be blown off. There should always be a ridge or roll for the purpose of securely dressing the lead, and to receive the lead-headed nails, which are usually 2 ft. 6 in. apart.

In recapitulating the leading circumstances to which attention must be paid in the gutters, flats, and lead-work of roofs, the following points demand special attention :—

1. The proper formation of the framing, so that the gutters may be in troughs of moderate width and sufficient depth, and not of excessive length.

2. That a proper fall should be given to gain rapidity in the current opposite, and enable it to carry off waters deposited in the beds of the gutters.

3. That the lead should be of the proper thickness for the several purposes.

4. That the lead should be laid loose, not soldered, and be well dressed in its place.

5. That great care should be bestowed upon the laps, to render them secure and impervious to the water.

6. That cast lead may be used for thicknesses of 6 lbs. or 7 lbs. and upward, but that lead of less weight should be milled to ensure equality of thickness.

## MEETING OF ARTISTS TO PETITION THE BOARD OF TRADE.

AT the Institute of Fine Arts, on Tuesday evening last, a very numerous meeting of artists was held, including Mr. Pickersgill, R.A., Mr. Hart, and other members of the Royal Academy, for the purpose of deciding on a memorial to the Board of Trade, praying them to abandon their proposed unwise interference with the Art-Union of London.

The first resolution* was moved by Mr. Doane, who said in effect that the real question they were met to consider was, whether the present system pursued by the Art-Union of London should be supported by them or not. In his opinion, there were very great and important advantages in the present system, and it was unquestionably highly popular. The Board of Trade could not interfere without a breach of faith or principle as regards the fundamental laws of the Art-Union. But to come to the real point at issue, it seemed clear that the Art-Union subscribers must, above all and before all, be pleased, if such an institution is to prosper. Now taste was progressive. To get people to interest themselves in art, they must be allowed to possess something they like to look at—to dwell on—to discuss with their friends—and thus to acquire their first lessons in the grammar of art. Depend on it, that even the finer works of art, if not the possessor's own taste or fancy, will only excite disappointment and repugnance, or, at the least, indifference, and so in place of being dwelt on, and their beauties discovered, be made a subject of traffic, be sold and got rid of for the cash they do like. The public could not be drilled into art as children are into the elements of school education. Boards of Trade and Art-Union Councils have no birch—no compulsory authority—here. The people must be induced to subscribe by other temptations and prospects than those held out by the Board of Trade, otherwise, in short, they will avoid such a Society altogether. It has been taken for granted that, without such a schooling, the general taste is, and will continue to be, bad; but that is a conclusion rather too hastily jumped to. Are inferior pictures in general selected? Even though they were, in many cases, is it not as with music, where a love in the first place of, and an indulgence in, the simple, naturally leads by degrees to an appreciation of the more elaborate, with which, if forced or called on at once to listen to it, many would be only perplexed.

Doubtless the Lords of Council have had the same object in view which the Art-Union Council have had; but it did not follow that because they were a higher council they were therefore right. On the contrary, the result of the system founded and pursued by the Art-Union Council, which had so greatly and so successfully exerted itself in educating the public taste for art, by a persuasive and enticing principle of self-selection level with their own power and intellect, clearly proved that *they* were right. He therefore thought it was high time that artists were bestirring themselves, for their own sakes, in the prevention of so injurious an interference as that of the Board of Trade must prove to be; for they might depend on it that the young and thriving spirit of art-appreciation amongst the public would be smothered and destroyed unless this difficulty were got over.

The resolution was seconded by Mr. George Raphael Ward, who said he supported the Art-Union Council in their very proper opposition to the Board of Trade. If that council had deviated from the Act of Parliament on which their authority was founded, such an interference might have been just; but it was little less than a gross breach of legislative faith thus to frustrate the objects of a well-digested system, by insisting on a mode which had already upset an Art-Union. The very threat of persistance in the interference had already done great injury.

Mr. Wagstaffe (engraver), in supporting the resolution with an earnest and eloquent speech, said that nothing could be more gratifying to him than such a manifestation of hearty interest in a common cause as that displayed by the present meeting. He objected to the interference of Government with the Art-Union of London. It was a direct interference with private property. The Art-Union had ushered in a new epoch in art. The Fine-Art Institute was established expressly for the purpose of defending the Art-Union; and he was glad to see it now upholding the same good cause. He acknowledged that he had not defended Art-Unions in the outset—he had opposed them; but seeing how successfully the principle, as it at present exists, had operated in advancing the taste for art and the profession of the artist, he now felt bound to support that principle to the utmost. It was not by the interference of Boards of Trade that the noble symphonies of Beethoven and his compeers had supplanted the paltry old tunes of theatres in the public taste and affections. It was not by cramming Homer's Iliad down the throats of those who preferred the home-grown and popular works of Dickens, that the literary taste of the public was to be exalted. Why should not the Board of Trade or committees select books for the reading and the shelves of the people, or their circulating libraries, if they are to select pictures for their private walls? Some foreign countries certainly allow this, that, or every thing to be chosen for them; but it is the genius of this country to allow every man to spend his money as he pleases in the choice of his own selection, and he denied the right or title of any British government to intermeddle with the freedom of that choice. Was it to be endured that the taste of the people for pictures, in place of ranging at will over a wide field of art, was to be drilled into the narrower limits of some particular school that might happen to be most agreeable to some particular member or members of some particular committee, appointed to dictate to others what they must choose to have for their money, while the wider range of art and of taste lay waste and uncultivated? For the noble manner in which the Art-Union Council had refused so great an amount of patronage and monopoly as this, they were all much indebted. He agreed with them in believing that such a monopoly would be most mischievous; and the many artists present must feel it to be for the general interest to combine together in determined opposition to such a measure as is sought to be forced upon the Art-Union Council.

A good deal had been said about the issue of the Art-Union prints; but he was well aware of the extreme difficulties to be coped with, and he thought the prints had been treated with injustice: to the opposition of the print-selling trade, it had been found that that trade had been benefited in place of injured by the Art-Union issue.

Mr. Cornelius Varley said that the very want of skill, or diffidence of taste or ability in the choice of prize pictures, induced many prize-holders to seek the advice of friends, and thus, by discussion, and by diffusion and reverberation of opinion and judgment amongst the people, to stir up a taste for art, and so greatly to promote the very objects which the Board of Trade professed to have in view, as well as those for which the Art-Unions were mainly instituted. The conduct of the Board of Trade in desiring that the popular food for taste in art should pass through the mental gustatory organs of committees ere it was presented to the eyes of those whose taste in art it was designed to nourish, reminded him of a specimen of Hottentot *taste* and good breeding, displayed while offering anything good in the shape of eatables to their guests, who were bound to receive it as a compliment only after it was well licked over by their hospitable entertainer's highly discriminative organ of taste. Such an example might afford a good enough precedent for baby nurses while offering pap to their young charges, but it would not be at all to the taste of a full-grown British public, who would undoubtedly reject with disgust the morsel offered them under auspices such as these. He believed that the Art-Union had adopted an excellent mode of encouraging artists as well as of cultivating public taste, a mode by which art would thrive and artists live.

A gentleman, whose name was not announced, remarked that one express object of Art-Unions was the encouragement of young and rising artists, and unless their less mature productions were sold, and yielded some remuneration, how were they otherwise in many cases to develop and attain to that maturity and excellence of which they were capable, and at which they aimed. As to the proposal that committees should go to the houses of artists, and select from their studios; no committee would ever be induced to give the time really necessary for such a purpose; and unless they did, how obviously unjust would the working of such a principle in practice be. Some one artist, or a few, might be pitched upon to save trouble, and if a committee, or a leading member of a committee, liked the style of some one artist, or desired to encourage him in particular, what was to prevent the selection of his whole stock by the lump?—Another artist declared that the Board of Trade seemed to have an immense job in view.

Mr. Franklin called attention to the fact that if the prizeholders were not allowed to select their own pictures, the very considerable additional capital now expended by them, in surplus payments for desirable or favourite pictures, over and above the amount of the prizes held by them, would at once be thrown out of the field, and much injury, therefore, even thus done both to art and artists. In fact the whole concern would be likely to resolve itself into a mere money speculation, since those who had pictures forced on them, whether they wished for them, or liked either style or subject, would of course only sell them as fast as possible: and, indeed, could only be induced to subscribe to such a system at all with such a merely mercenary object. As to the prints issued by the Art-Union, he must admit that they were not sufficiently good; but he was certain that the Art-Union Council had done everything in their power in the midst of difficulties, while he believed that the old opposition of the printsellers was still at work.

Mr. B. R. Green said he should like to know why the richer patrons of art were to have a free choice in the selection of pictures, while the Art-Union subscribers, who were equally patrons of art, were to have no choice whatever in the property purchased with money as much their own as if it had come out of the pocket of some one richer party with probably little or no real taste in the exercise of even of his free choice.

It was here proposed to make some amendment in the form of the resolution, as bronzes, &c., were not selected by the prizeholders, but a general feeling prevailed that pictures were the sole subject under consideration, and that it would be improper to mix that subject up with any other. The amendment was therefore withdrawn, and the resolution was passed without a single dissentient.

Mr. Moseley, in moving the second resolu-

* Resolved, that this meeting views with deep regret the decision of the Board of Trade with regard to the principle upon which the Art-Union of London is established by the Act of Parliament, prohibiting the right of selection of the prizes by the successful subscribers themselves, and that this meeting trusts that the representation which may be made to the Board of Trade will induce the Committee to withdraw all such interference with the Art-Union of London, and permit it to carry out its objects according to its original and vital principle.

tion,* said that artists ought to pull a little more steadily together than they had hitherto done, and many evils and drawbacks would thus be completely obviated.

The resolution being seconded, Mr. Wagstaffe suggested that the Institute ought to come to an understanding with the body of prizeholders by calling a meeting of them, and uniting with them in still further carrying out the objects which all seemed to have so much at heart.

Various other gentlemen expressed their accordance with the suggestion of Mr. Wagstaffe, one after another declaring that they knew many subscribers who were determined to keep their guineas in their own pockets if the Art-Union was to be dictated to by a Board of Trade setting itself up, by an odd misnomer, as a Board of Taste.

The second resolution was then unanimously passed, and the proposed memorial to the Committee of Privy Council for Trade, was read, and its adoption moved by Mr. Wagstaffe, who said that the unanimous feeling of artists and Art-Unions, seemed to be embodied in the brief but pithy phrase, "Let us alone." Mr. Dibdin, who seconded the motion, said that a demonstration of this sort was much wanted. The memorial was then unanimously adopted.

Attention having again been called to the fact that very great loss to artists must inevitably be incurred if prizeholders were not allowed, to choose a picture as they now frequently did, worth double the amount of the prize; it was proposed that the Board of Trade be requested to receive a deputation in order to enter into necessary details on presentation of the memorial. The chairman said, he had reason to think that the Board would receive such a deputation, and he could assure the meeting there would be no want of a goodly corps of M. P.s to accompany it. It was, therefore, unanimously "resolved, that a letter be written to the Board of Trade that they be requested to receive a deputation from this meeting on this very important subject."

The Chairman (Mr. Ellidge) then said that, anticipating the most kindly feeling towards the council of the Art-Union for the noble stand they had made against the thrusting of an enormous amount of patronage on themselves, Mr. T. F. Marshall would move the next resolution.†

Mr. Marshall, in putting this resolution to the meeting in a fervid and able speech, the sentiments of which in favour of the subject of the resolution were repeatedly responded to by hearty and unanimous acclamations, reminded his hearers that, until the Art-Union lent them a helping hand in 1836, their profession was at best but a precarious one and full of difficulties, their prospects being entirely dependent on individual patrons on the one hand, and on picture-dealers on the other. The Art-Union, in giving them the public as their patron, had been ever since emancipating them from so exclusive a dependence on either. How well it had succeeded, and is succeeding, in doing so, let the unanimity and the feelings of all present testify. Its roots once fairly struck, it rapidly yielded its fruits, and many a rising artist of the day has ever since prospered on these fruits. The present plan of the Art-Union has done more to create and increase public patronage, and to foster a love of art, than any plan ever proposed. Minor errors or defects in the working of it had been adverted to. The subject of the failure and unpopularity, to some extent, of engravings issued by the Art-Union, and the causes of that failure, was a difficult one to touch upon. Great difficulties have stood in the way of the council itself. Electrotype had been thought to be a cause of the failure, but he thought the secret of the unpopularity lay deeper. He regretted that, in his opinion, the council seemed to have lost sight of the spirit of a passage in their prospectus in allusion to art of home growth, which he read. Yet nevertheless he said we owe them a deep debt of gratitude, and it is certainly a reflection on us as a body that we have not already resisted the opposition advanced to the hitherto successful progress of the Art-Union. It is because it has hitherto stood alone and undefended from without that the Board of Trade have ventured to press its interference so far. He trusted and believed, however, that the cordiality and unanimity with which they now received the present resolution, as well as those previously passed, would constitute a powerful preventive for the future.

Mr. J. H. Foley (sculptor) then seconded the resolution, and it was passed with acclamation. Thanks were voted to the Chairman, and the meeting separated, after most of those present had signed the memorial.

* Resolved, that a memorial embodying the foregoing resolutions be prepared, and, when signed by the body of artists, be presented to the Privy Council for Trade.

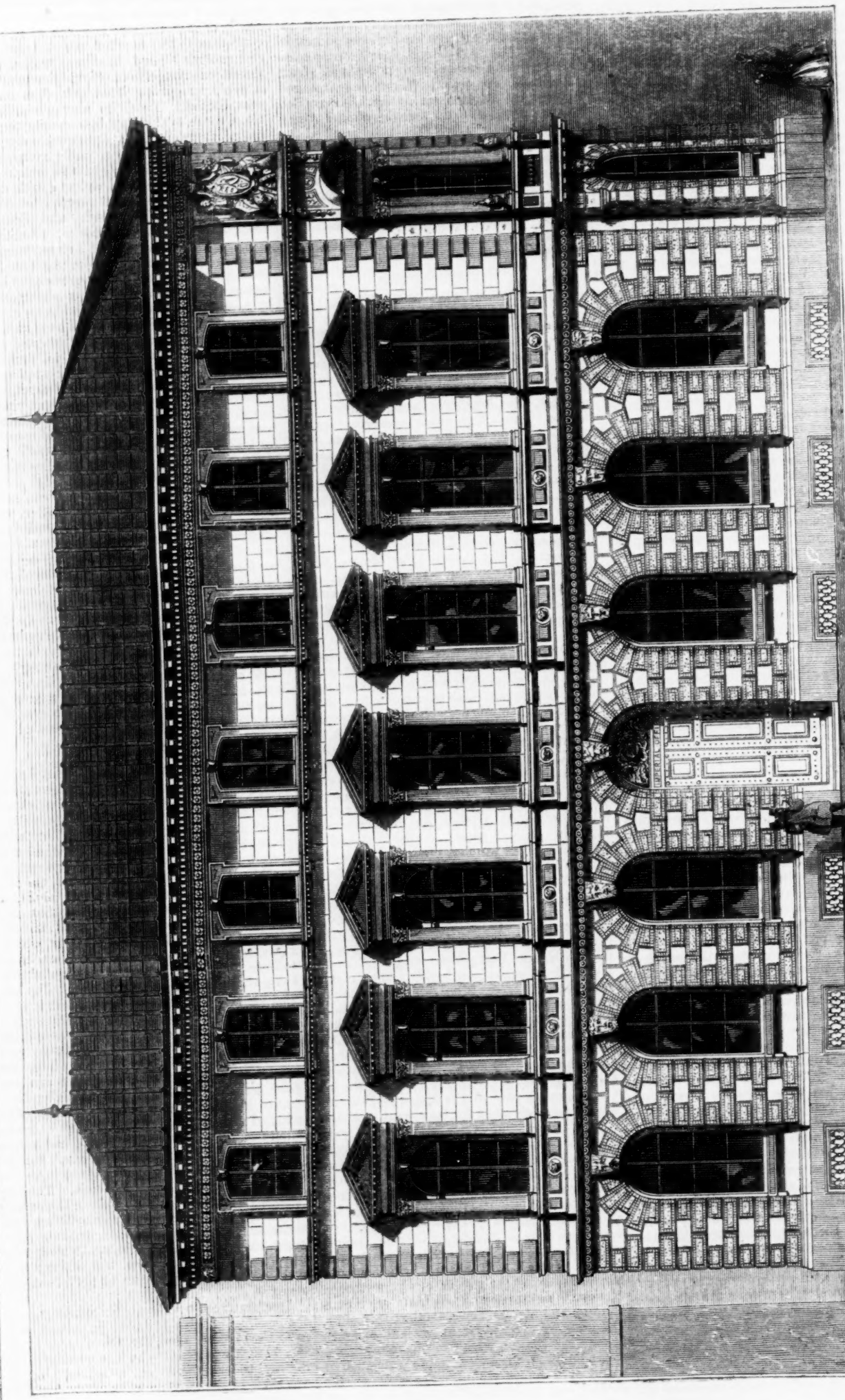
† Resolved, that this meeting take this opportunity of expressing the warmest thanks of the body of artists to the Council of the Art-Union of London, convinced that the Council have manifested at all times an anxious desire, in the face of many difficulties, to promote the diffusion of a love of art among the people, and the elevation of the position of the artist, and more especially for their disinterested and determined resistance to the measures proposed by the Board of Trade, which would inevitably place in the hands of the Council a vast amount of patronage.

## NOTES IN THE PROVINCES.

THE new steam-basin at Portsmouth, was to be formally opened by her Majesty and Prince Albert to-day (Thursday), in presence of most of the Lords of the Admiralty, and an assemblage, for whom 40,000 seats were to be provided, the Admiralty being desirous, it is said, to "give a high official character" to the formal opening of this national work.——Operations have been commenced in Angel-street, Worcester, on the site of one of the projected Corn Exchanges. The contractor is Mr. Joseph Wood, of Blackfriars, who is bound to demolish the old and erect the new buildings, by 1st September, and has accordingly already cleared a considerable portion of the ground. The design is by Messrs. Rowe and Son, of Worcester. It will consist of a hall 75 feet long by 60 feet wide, exclusive of offices; will be lighted from a roof framed in one span by four ranges of glazed compartments, extreme height from the floor 48 feet. The entrance front is in the Grecian Doric style, with an approach of stone steps forming a recess, and relieved by four columns supporting an entablature, with balustrade, &c. Each side of the entrance in front is divided by pilasters into equal compartments.——The new district church of St. Mark's, Easton, near Bristol, was consecrated on Thursday week. It is in the Norman style, of stone, with free-stone dressings, and consists of a nave, about 70 feet by 30 from west end to chancel, the latter semi-oval, lighted by four windows, filled with stained glass. At the west-end is a Catherine-wheel window, of stained glass (presented by the Rev. H. Richards, Rector of Horfield). The sittings are open, of oak, for about 400 persons. The pulpit is of Painswick-stone. At the tower entrance is a font, of same material. The roof is open within. The church was built, and on a site given by Sir R. Colt Hoare, Bart., from designs of the late Mr. C. Dyer, carried out by Mr. Gabriel, architect. The builder was Mr. J. Brown, of Stoke's-croft: painting and glazing by Mr. Edkins.——The journeymen masons of Newport have "unanimously resolved that no master-builder in the town shall be allowed to contract for any other than mason's work". The *Beacon* wonders what they will do next.——At the late Government timber sale in Forest of Dean, the utmost price obtained for bark was 4*l.* per ton, being 1*l.* per ton less than the price last year.——The foundation-stone of a pillar to commemorate the visit of her Majesty and Prince Albert has been laid at Ramsey, Isle of Man.——The parish church of Rodborne Cheney, near Swindon, is to be partly rebuilt and enlarged, at an estimated cost of 1,500*l.*——Repairs of the tower and spire of St. Mary's Church, Oxford, are proposed.——The first stone of the Asylum for the Licensed Victuallers of Sheffield was laid last week, at the village of Grimesthorpe. Messrs. Weightman and Hadfield are the architects, and Messrs. Fewsdale the contractors. The building will consist, at present, of seven comfortable houses, which will form the centre of the building, the two wings to which will be added at a future period. The cost of the ground was 1,200*l.*——The *Sheffield Iris* has authority for stating that the celebrated gardens and mansion of Alton Towers will be opened from 1st of June till the end of October, on Tuesdays and Thursdays. Tickets of Mr. Orrell, Shrewsbury Arms Hotel, Farley.——The mutilated tomb or shrine of a Babington, in the little church of Kingston, Nottinghamshire, near the Kegworth station, contains "bas-relief of heaven and hell, of the Deity, of 200 different baboons on 200 different tuns—in fact of all things sacred and profane"—and has been called one of the seven wonders of Nottinghamshire.——A new river cut has been opened at Astwick, near Stotfold, Beds, by a private individual, Mr. George Waldock. It is nearly two miles and a half long and twenty-two feet deep, and has been cut through a stiff clay towards a water-wheel, 20 feet high, and weighing 25 tons, shaft 5½ tons, attached to a mill, driving eight pair of stones, and erected by Messrs. Wentworth, of Wandsworth, and Spells, of Clophill, engineers; Wilshire, of Stotfold, builder; and Seymour, of Arlsey, carpenter.——The foundation-stone of the temple for Dr. Jephson's statue, in the gardens at Leamington, was laid on Saturday week before last, by Lady Somerville. The design is circular, and the style Corinthian. The new church at Sewerby, near Bridlington, consecrated week before last, is in the Norman style, and decorated to the minutest detail. The windows, of stained glass, were designed and executed by Mr. Wailes. The whole was erected and endowed at the expense of Mr. Yarburgh Greame, of Sewerby-hall.——The contracts for building two groynes on the south rocks, at the Sunderland docks, in continuation of five already completed, a coffer-dam, to be placed within the tideway of the Wear, excavation of marly rock and other matter within the same at the entrance of the intended Tidal Harbour, have been taken by Messrs. Hunter and Thompson, of Sunderland.——Whilst levelling the eastern end of the choir of Durham Cathedral, some workmen have uncovered the tomb of Bishop Beaumont—two massive stones, weighing about ten tons. This monument was prepared in the bishop's lifetime, and is recorded to have been inlaid with brass. The design is yet visible, though the brass work has disappeared.——Dr. Wardlaw's Independent chapel, at Glasgow, has been sold to the Edinburgh and Glasgow Railway Company for upwards of 12,000*l.*

READ, MARK, AND LEARN.—Mr. Serjeant Thompson recently delivered a lecture on printing to the Hull Mechanics' Institute, of which he is the president, the conclusion of which we will find room for:—"One of the chief objects of this noble art," said the learned serjeant, "is, that it enables men to consider by themselves, in their own studies, the ideas of subjects given to them by other minds, and thus are they enabled to carry out that noble precept 'prove all things, and hold fast that which is good.' This is a time in which I cannot but think every man should endeavour to form for himself a just conception of every thing that is going on around him. The bane of almost every person who is attracted to study, without first binding his attention to what he studies, is to form superfluous opinions upon every subject, and it is only by considering, in solitude, the works which you have in your own library, that you can produce such an effect as will hereafter be a source of satisfaction to yourselves. The effect which I wish to be produced is this—that we shall not have to say, 'I would I had known that, I would have done it before,' for the time will come when you cannot alter the effects of not having attended to it. The way to attain a high and noble position is to study the works of those who have gone before you, especially of those who have written upon those things which are similar to what may attract your attention now, but without the same prejudices of party which are rife at this time."

INSTITUTION OF CIVIL ENGINEERS.—At the meeting on May 16th, no paper was read, in order to afford time for the discussion of Mr. Gooch's paper, "On the resistance to railway trains at different velocities," which was read at the meeting of April 18th. The principal speakers were Messrs. Brunel, Gooch, Bidder, Locke, Harding, and Russell, and their arguments were necessarily so complicated by calculations as to render it difficult to convey, within reasonable limits, even an outline of the discussion.



NEW IMPERIAL INSURANCE-OFFICE, THREADNEEDLE-STREET.—MR. GIBSON, ARCHITECT.

LAING &c.

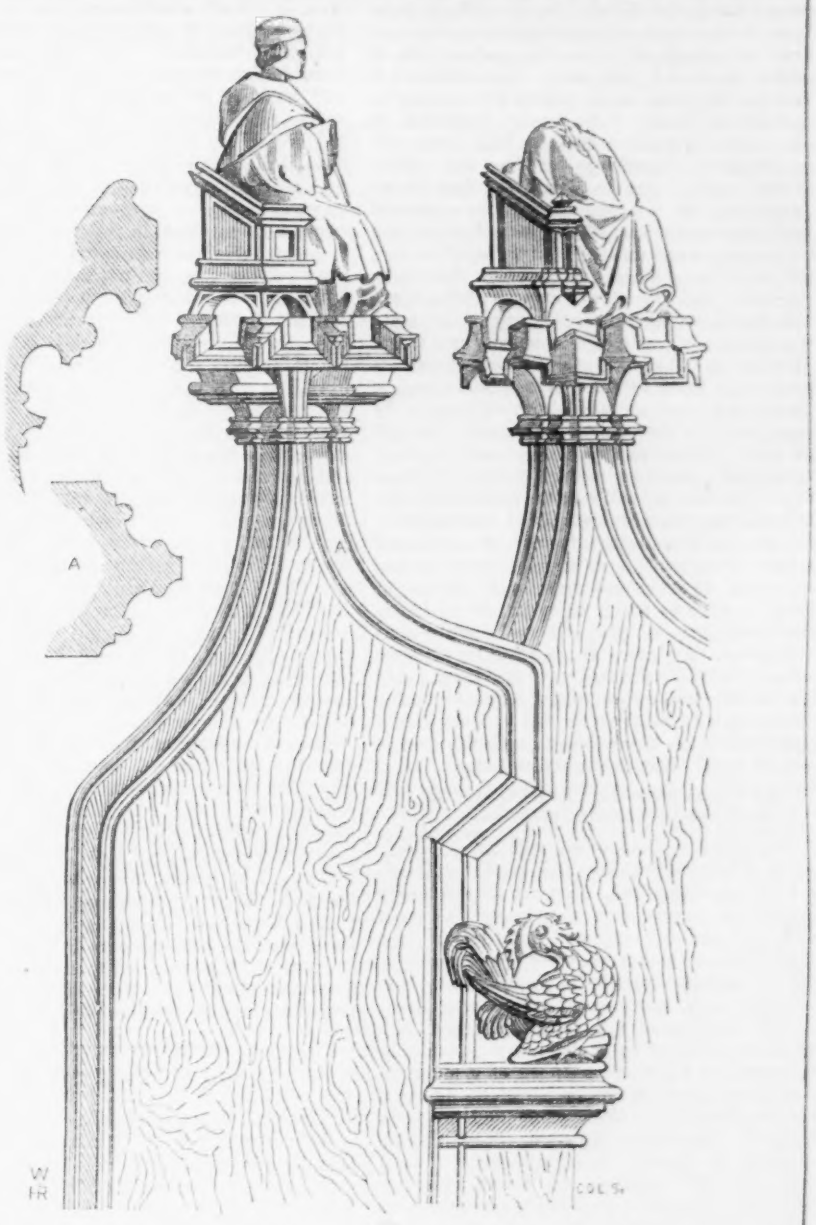
## IMPERIAL INSURANCE OFFICE,
### THREADNEEDLE-STREET, CITY.

THE accompanying engraving represents a building, now nearly completed, which has been erected at the corner of Threadneedle-street, nearly adjoining the Hall of Commerce, for the "Imperial Insurance Company." The ground on which it stands is angular, and our view shews the longer side of the edifice in the return street. Next week we shall give some particulars of the structure.

## STALL-ENDS, LANDBEACH CHURCH, CAMBRIDGESHIRE.

AMONGST the great patrons of art whom the middle ages produced, few appear more worthy of celebrity than John Alcock, Bishop of Ely, whose rebus is seen on the arm-rest of the accompanying bench-ends now in St. Peter's Church, Landbeach, but which were originally in the chapel of Jesus College, Cambridge. At the suppression of the convent of St. Radegund, Cambridge, in the 12th year of King Henry VII., the munificence of this splendid prelate converted it into a college, which he dedicated to St. Mary, St. John, and the virgin St. Radegund; and this edifice, which combines some of the choicest examples of Early English architecture with much of the profuse decoration of the end of the 15th century, now forms, under the name of Jesus College, one of the purest architectural gems which ornament the banks of the Cam. The small but beautiful chapel at the east end of Ely Cathedral, and known as Alcock's Chapel, is, from its elaboration, a still more princely monument to his memory; but Landbeach Church, though of less pretension than either of the works which have been alluded to, recalls with agreeable associations the name of this amiable bishop, whose piety was so great, that an encomium was even passed on him by Bale, who was warmly devoted to art, literature, and devotion, and united in his long discourses profound learning and impressive ardour. An elegant carved oak door which Landbeach Church once contained has been removed to Ely Cathedral, but the stalls remain in their original condition, excepting that a coat of white paint (about, however, to be removed) in some degree mars the general effect. The arm-rests are all fashioned into the rebus of a cock standing upon a ball; but the poppy-heads, which are all various, contain figures of bishops, priests, and acolyths, seated in chairs, and supported by battlements of extreme intricacy. Of the latter, two specimens are here given, one of them somewhat mutilated, the other more than ordinarily well-preserved. These examples with much propriety are now being copied in carved oak as stalls for the fellows and undergraduates of Jesus College, in the restorations and improvements which have already been announced as taking place in that memorable building.

STALLS—LANDBEACH CHURCH, CAMBRIDGESHIRE.



ENGRAVING OF THE NEW PALACE AT WESTMINSTER.—We lately observed in the shop windows a large print of the New Houses of Parliament, and wondered as we looked at the great tower and other parts of the structure, whether the representation there given was *really* what the architect meant to carry out. The following letter from Mr. Barry has eased us considerably:—"Sir: "Having observed in several of the print-shops an engraving prepared and published, without my knowledge, by Mr. T. H. Ellis, of Jewin-street, purporting to be a view of the New Palace at Westminster, with the *Towers now in progress*, I feel myself called upon to state publicly that the representations of the towers in that engraving are altogether at variance with the design adopted for them, and that the view is in other respects very inaccurate. I venture to hope, therefore, that by the insertion of this letter in your valuable and widely-extended publication, you will do me the favour to assist me in denouncing, especially, the representation of the towers in this engraving, as a gross caricature of the most important features of my design for the New Palace at Westminster."—I am, Sir, &c., C. B. Westminster, May 23, 1848.

## CRITICISM OF ARCHITECTS.
### WANT OF DEFERENCE FOR THE OPINIONS OF ARCHITECTS—AMONGST THE PUBLIC—AMONGST PROFESSORS.

IN the present position of architecture as an art, there is much that must occasion pain to those who mingle any love of it with its practice as a profession. Provided architects are fully competent to the development of their art, and properly qualified for that end by a knowledge of principles and forms already educed, there should exist, amongst the public, great deference for their opinions on all matters of taste, and perfect confidence in their ability to produce beautiful works. But this state is very far from characteristic of the public. It has so little manifested itself amongst *students*, as to have led to the admirable remarks of Professor Cockerell in his last lecture. The architect himself, when criticising the works of his contemporaries, is, like these, too liable to commit injustice. He, at least, ought to know how numerous are the points in which the mere construction, form, and detail of a building may be influenced, how these, in many cases, dictate in the design, and that, ere the merit of a work can be properly appreciated, something like the same amount of attention to the circumstances of the case may be expected from the critic, as was devoted by the designer. How constantly do we hear this or that building condemned for peculiarities of arrangement, or decorative treatment, which a mere representation of facts and reasons would convert into beauties. It is true, as it has been said in an article in THE BUILDER, that the critic will require some show of reason for preferring, in each case, the form there employed, to others which may exist, but still there should be great deference to the opinion of that individual who has had the best opportunity of arriving at a matured decision—namely, the designer himself.

The architect should eschew that unfounded, or hasty vituperation, in which ignorance and impertinence are about equally blended: from his knowledge of the difficulties and responsibilities of his vocation, it should give him pride to admit the excellence which others are unable to appreciate. He should consider what were the circumstances of situation and plan, what were the other considerations exacted, and *then*, and not earlier, say if the forms and character of decoration employed be such as there is reason in the use of, in variety and in intrinsic beauty, compared with other forms with which the architect is familiar. His knowledge of the whole history of architecture, of the several forms which each style has given to material, places him so far above the general public in the ability to judge of the merit of a work. But in omitting to consider the data on which the design was founded, he is guilty, not only of injustice to his brother professor, but of a method of criticism which, in one who makes the art his profession, is productive of the most injurious results.

An opinion of an Oxford tutor in a case of surgery, of a physician in a matter of theology, or of a mill-owner or manufacturer in a moot point in law, would have no great weight, and would hardly be offered; but the difficult question of the merit of an architectural design, is one on which all think themselves able to arrive at sound judgment. The architect is not free from the error, which he is ready to ascribe to these, if he passes judgment in the same ignorance of facts and data. He possesses a knowledge of the art, which would enable him to detect the fact of an invention, to estimate its value compared with other variations of the same feature, and to ascribe to the author the merit which is due. He is able to see the reason which should be apparent, for the use of any particular form, whether in its pre-eminent beauty, or in beauty conjoined with variety,—for he will not forget that the most beautiful form which the architect might know to be available, is not always that which he would be right in choosing; he must produce that which has novelty, as well as that which has propriety and accordance with principle, and is relatively beautiful. He has the aptitude to discover the circumstances which influenced or restricted the design; let him use this faculty, or in place of a hasty judgment, give that deference to him who has had the best means of balancing every requirement with every feature of effect, and who has at least devoted mature consideration to them. It is easy to discover errors, but difficult wholly to avoid them. Let the architectural critic, whilst requiring that a reason should be given for the preference of a particular form, not refuse to seek that reason which could often so readily be offered.

"But you are tired—I'll tell a tale.—Agreed.—
Where London's column, point———"

No, that is not the story, and how, indeed, could it have been known to Pope, for although a building, unfinished, does not always imply that it was commenced only lately (for proof of which see a "column" upon which Pope would have written a satire,—"The Nelson"), yet the elegant structure to be referred to, was certainly not commenced very long since. And if consequently, it is not recorded in a chronicle of very early date, that a building intended to serve the purpose of a museum, was in progress in the parish of St. James's, the anecdote to be related came to the knowledge of this present deponent through some channel of equally undisputed verity. It is said, that this building has for its author an architect who would do nothing without being able to give a "reason" for adopting any particular arrangement or decorative detail.—The principal, or most elaborate front, which has lofty stories, and very large windows, is in a wide street, one of the principal thoroughfares, whilst the entrance is in another front which is much less elaborate, and is in a narrow street. It chanced—so runs the story—that two architects, one of mature age, and the other young, together examined this building. The younger was the first to give an opinion. He said nothing of the beauty, or otherwise, of the doorway, of its importance compared with those of public buildings generally, or of its obviously serving for the entrance to an important public building; the details of windows, arches, panels, cornice, coins, and piers, were unobserved, but he confined himself to one item of arrangement, which to him gave ground for indiscriminate censure. The architect, he said, by placing the entrance in what was not the principal elevation, had acted in direct contravention of one of the most recognised principles of arrangement and design. This was, he said, in all cases, to place the doorway in the most important position, so that it should be obvious to all who wished to enter the building, and to make it so not only by position, but prominent by its decoration; and he affirmed, that every stranger who wished to visit the Museum, would be unable to find where the doorway was, unless a direction-board were placed against the building, which, to his thinking, would make the design very ridiculous. To him, the other, who may have been the writer of this notice, answered:—"Your principles are good ones, but you have committed the usual error of the young, in arriving at a hasty conclusion, with no knowledge of the premises—without considering how far other principles, in addition to what you have mentioned, may have required to be taken into account in this particular instance. You do not allow anything to the architect for circumstances of ground, light, and destination of the building. You forget that it has been the fate of every architect, as it assuredly will be that of yourself, to find our own wishes secondary to the caprice of employers, and that Wren is to this day censured for defects in the architecture of St. Paul's Cathedral, which did not exist in the design which he was anxious to have adopted. You have remarked how often, in really excellent works, a confined site has required the entrance to be placed at the side, and not in the centre of the building; *that* position you would, if quite consistent, object to. For myself, I wish to feel none of that envy which is said to be inseparable from artists; and whilst I would not have that incompetence which would blind me to positive defects, I would rather dwell upon beauties. In this instance, I know that we are looking at the work of a practised architect, and I would, as a talented professor has recommended, judge this master with the generosity of the English law, which considers all as innocent till proved to be guilty. I have no doubt that good reason could be given for selecting an arrangement which is unusual, and that reason would remove, with me, all ground to ascribe negligence and bad judgment to the architect. I may differ in opinion, but if he can give good reason for *his* view, that is all that I require; and in any case I will not be debarred from admiring the design in other features, if it deserve it. But, I may say, that had the entrance been in the principal front, the space would have been—if I guess at the plan rightly—most injuriously interfered with, where, from the imperative necessity of good light in this building, it could ill be spared, and whether this be the reason of the arrangement, or not, the error of your criticism is, that you have not taken this point into consideration. Had you done so, your condemnation of the architect might have been qualified." Such is the story,—the moral has in this case preceded it.

## COLOUR IN ARCHITECTURE.

### THE ARCHITECTURAL ASSOCIATION.

AT a meeting of the Architectural Association, held in Lyon's Inn Hall, on Friday, May 12th, a paper was read by Mr. William Wood Deane, "On the Application of Colour to Architecture." The author commenced by pointing out the universal presence of colour in the works of nature, and its great effect in the production of their beauty, observing that, as all man's ideas of beauty are derived from nature's works, to delight man the artist must endeavour to work like nature, and avail himself of the means which she employs to produce pleasurable sensations.

The first essential of beauty in architecture is form, but nature is not content with form alone, and indicates colour also as a legitimate means of producing additional beauty. The author took a rapid survey of the different modes in which coloured decoration had been employed in architecture during each succeeding age, from the days of Egypt's grandeur to the present time, observing that such a review is calculated to remove all scruples in respect to the employment of colour, from the minds of even the most prejudiced worshipper of precedent; while to those who study the works of past ages, merely to profit by their experience, to whom they are aids to originality rather than restraints upon their fancy and genius, such vestiges of antiquity are replete with suggestions of the greatest value.

The application of polychromatic painting to external architecture has received much attention abroad, and led to several bold attempts in Germany and France. In a country like our own, where surface decoration appears in continual danger of destruction by the weather, external painted decoration was thought to be inadmissible. But our various building materials afford opportunities of producing much agreeable variety of colour. The tints of the materials of a building should harmonise as far as possible with surrounding objects.

Interior decoration has for years received undeserved neglect at the hands of the architects of England, but it is a subject which has happily begun to engage the attention of the artist and the connoisseur. Historical paintings are undoubtedly the noblest means of introducing colour,—as these, while they assist the design of the architect, are themselves to be ranked among the noblest efforts of the human mind, calculated at once to adorn, to delight, and to instruct. Polychromatic painting affords a means of displaying the liveliest fancy and most elegant design; and even in essentially cheap architecture, a few well-disposed lines of harmonious colour may give a pleasing character to an apartment, at a very small outlay of money, although not without the exercise of a considerable amount of judgment. Painted glass may be used with propriety in classic as well as in pointed architecture; although the practice of imitating oil paintings in this material, in vogue during the last century, is undoubtedly a misapplication.

In conclusion, it was contended that the application of colour to architecture had been proved to be in accordance with the practice of the past ages, to which architects look for precedent, and, above all, to be a mode of obtaining beauty taught and practised by nature, from whose example all true art is derived.

## RAILWAY JOTTINGS.

THE number of passengers carried on railways in the United Kingdom during the year ending 30th June, 1847, was 51,352,163*l.*; receipts, 5,148,002*l.*; and for goods, cattle, &c., 3,362,884*l.*: total, 8,510,886*l.*: increase on preceding year, one million. The rates of fare average on the Midland lines—first class, 3d.; second, 2d.; third, 1d. per mile: on the Great Western, 2¾d., 1¾d., and 1d. per mile; on the North Western, 2⅛d., 1⅛d., and 9-10d. per mile. ——The Scottish Companies are preparing for a conjoint application, along with the English Companies, to Government, for a loan of money to enable them to finish their respective undertakings, and thereby afford employment to the destitute working population.——In describing the late fearful accident from which we so narrowly and fortuitously escaped on the Great Western, we believe we gave the gist of the unfortunate cause which led to it, in saying that the train, being a few minutes after the usual time of passing the Shrivenham station, the porter in fault, who was usually at dinner during that time, concluded, or took it for granted, on his return, that it had passed as usual. Now, instead of allowing any such employé to *conclude* habitually that events have taken place as usual, were the law strictly laid down that the very contrary 'conclusion' be in all such cases come to till *its* contrary be ascertained, a fruitful source of accidents, would be sure to be obviated. As the *Times* justly remarks—"Where human life is concerned, nothing should be taken for granted—everything should be proved—nothing but danger should be apprehended until the contrary be ascertained." For the neglect of so simple and effectual a regulation every company must forthwith be held responsible. Indeed, it appears most strange that so obvious and correct and essential a rule should still remain to be established on any line, and more especially on the Great Western, where, perhaps, more good-will to establish public safeguards has been displayed than elsewhere. ——A correspondent of the *Birmingham Journal* points attention to the fact that repeated, but hitherto unavailing, recommendations have been made by juries at Rugby in cases of accident, "that a suitable place be provided at the station for the reception of those who meet with accidents." It is easy to see the force of those motives, which, apart altogether from questions of expense, may have operated in the prevention of so desirable and requisite an adjunct to accidents ever and anon occurring; but so long as accidents do occur, or have so much chance of occurring as they still have, Companies ought to be compelled to prepare beforehand the most ample and ready accommodation, with all requisite surgical and medical appliances. In this case, certainly, ridicule and the fear of ridicule have not operated as a corrective agency, but the contrary, for which we believe our worthy

contempory *Punch* and his witty coadjutors have, it may be unwittingly, much to answer. In the recent accident just referred to, the poor fellow Lee, whose left leg was a complete pulp from hip to ancle, is said to have been "carried in that state on a slide (used to lower luggage from the tops of the carriages) to an out-house, cold and damp, without a particle of furniture, and no light save the flickering of a lantern." It is admitted, however, that otherwise the utmost possible attention was paid to all who were in any way injured. It is nevertheless advisable that the want of proper and ready accommodation and appliances in such cases on all lines should be brought under the notice of the Secretary of State, if not speedily remedied.——Mr. Lane, brewer, Vauxhall-road, Liverpool, has patented an invention for preventing accidents from collision, and has models, driven by a locomotive, running on a temporary line on his own premises. The models, in recent experiments before the mayor and others, were repeatedly brought into contact at full speed against resisting bodies, "and in no instance did the collision produce the least apparent effect on the body, wheels, or works of the models." Mr. M'Conochie, of the firm of M'Conochie and Claude, engineers, has been engaged to make a series of experiments, the results of which will be published. The peculiar feature of the break used in this invention consists in its locking all the wheels of each carriage at the same moment, by aid of the compression of water. The buffers act in connection with the breaks, by compression of air with water in cylinders. There are also improvements in the adjustment of the bearing-springs, &c. A writer in the *Mining Journal* states, that to his astonishment a whole train was brought to a stand-still by this invention, within a few feet, at a given signal.——It has been suggested that for convenience, in second class carriages with high enough roofs, two or three straps should be stretched across the roof for the suspension of hats, as in first class carriages,—a cheap enough convenience to passengers surely.

## METROPOLITAN COMMISSION OF SEWERS.

### THE ORDNANCE SURVEY.

A SPECIAL general court was held on Thursday morning the 25th inst., Committee-room No. 10, House of Commons. The Hon. F. Byng took the chair.

The minutes of the proceedings of the committee of Tuesday, 25th, on the subject of the Ordnance survey of the metropolis were read, in which it appeared that a difference of opinion existed as to the power of the commissioners to appropriate the sewer rates towards carrying out that object. After several divisions upon the question, it was finally resolved that the opinion of the Attorney-General and Solicitor-General and Mr. Peacock should be taken as to the power of the court to appropriate the sewer rates in the way proposed, which was given in as follows:—

"We are of opinion that the Commissioners of Sewers cannot cause a general survey and plan of the metropolis to be made at the joint expense of the several districts now under their control by virtue of the seven new commissions which have been lately issued. But we are of opinion that they may cause a separate survey and plan of each district to be made, and pay the expenses of each of such surveys and plans out of the rates of that district to which the survey and plan relate. The commissioners may employ the same persons to make all the surveys and plans, so that when made they will substantially have the same benefit as they would if one general survey and plan were made, but the expenses of each survey must be kept separate. We see no objection to their employing the officers and persons in the Ordnance department to make the plans and surveys; but such officers and persons will have no greater powers or privileges as to entering upon lands without consent or the like, than any other engineers or surveyors who might be employed by the commissioners.

"Secondly.—If it should be necessary in making a survey for the purpose of correctly constructing or improving sewers within the limits of any particular district, to extend the survey beyond the limits of that district, or to examine any water-lines or levels out of the district, we are of opinion that the Commissioners may pay the expenses thereof out of the rates of the district in respect of which such work may become necessary; but care must be taken not to incur any expense which the survey of the district does not require.

"Thirdly.—We are of opinion, as before observed, that the Commissioners must charge each district with the actual expenses incurred in respect of such district, whether the survey be made by contract or otherwise; and if the work be done by contract, a separate contract in respect of each district must be made.

(Signed) "JOHN JERVIS.
JOHN ROMILLY.
B. PEACOCK."

The following recommendations of the General Purposes Committee were also read:—

"That the committee recommend to the court that the Ordnance department be requested to proceed with the block plan, so far as may be necessary for the purposes of every district, with all practicable speed, and that the Survey Committee be instructed to take care that the filling in of the necessary particulars be confined to the rateable districts respectively.

"That the committee recommend to the court that the Ordnance department be requested to appropriate the charges of the triangular and block survey to the various districts, so that every district be charged only with the proportion of the expense duly incurred for the purposes of that district.

"That the committee recommend that such payments on account, as may be necessary for proceeding with the survey, be made from time to time out of the rates."

Mr. Chadwick, in moving that the opinion of counsel and recommendations of the committee be adopted, said that the course advised by the law officers of the Crown was precisely that which they had always intended to pursue. The metropolis had for years paid its quota of rates to the Consolidated Fund, out of which the surveys of the large towns in the north had been made, and, even on this ground, he considered, was entitled to its share of the charge upon that fund for the present work, so as to render any resolution upon the subject unnecessary. Parliament, however, which was omnipotent, had thought otherwise, and had determined that each town should henceforth pay for its own. He was willing that Parliament should be set right upon this point, but still he might undertake to say for himself, and even upon the very highest authority—that of Sir H. de la Beche—that the delay of a month would cost fully the amount now in question. The weather, too, and other circumstances, were highly favourable to the work, and if not proceeded with immediately, the eventual loss could not be estimated at less than a quarter of a million. He therefore moved the adoption of the opinion and resolutions of the committee.

Mr. Broderip seconded the motion.

Mr. Leslie said, that in the early stages he saw that the whole question was surrounded with difficulties, but they had been relieved from them by Government undertaking to defray the expense, on receiving the approbation of Parliament to such a course. What had been the result? why, that the House of Commons had refused its sanction to the vote, and they themselves had then undertaken to pay the expense out of the sewers rates. He (Mr. L.) objected then to what was demonstrated now, that they had no power to pay for the survey out of the sewers rates, and he could not sanction the report of the Committee, which was not clearly justified by law as a Court of Sewers. Besides, a private gentleman had offered to undertake the work at a less cost, and to perform it as unexceptionably and in a less time than that required by the Ordnance department, and why was his offer declined? The objection was, that he had no legal power—no right, to enter on private property, and this point stood first in the answer of counsel to their own application; clearly shewing that they could do that themselves. Then another point arose, shewing, that by the local Act of the Holborn and Finsbury district, they had no power to carry out the plan as far as that division is concerned, as one of the clauses declared that no work exceeding 200*l.* in any year should be performed unless such work was performed by contract; and by another clause it was stipulated that, before any work was executed to the amount of 50*l.*, security should be given for the due performance of the same. How could they comply with these clauses in the course proposed? Surely they would not contend that a survey of the metropolis was not work? He advised them not to go on in a hasty manner until they had again taken the opinion of the House of Commons, for, he felt assured, there was a bar to the proceedings as far as Holborn and Finsbury were concerned. Should they do so, he believed they would save much valuable time, for he believed the law did not authorise them to proceed in the manner they proposed.

Mr. Slaney was as desirous as any member of the court to carry out a complete survey, which he believed would lead to true economy in the end, but how was it to be done? It was estimated to cost 25,000*l.* If they got an Act of Parliament, it would give them facilities, and spread the rate of charges over a period of thirty years, instead of throwing the whole expense upon the present ratepayers. He considered it advisable, however, before proceeding further, that the commissioners should wait upon her Majesty's Government; and he had no doubt that a short Bill might be brought into the House to do all that was required.

Lord Ebrington, as a member of the House of Commons, could state that Lord Morpeth had given assurances that the charges would be spread over a long period, and that a bill for that purpose was already in preparation.

Mr. Chadwick, in reply, said that it was a matter of favour to have the assistance of the Ordnance department in carrying out the work, whose officers and men gained nothing by it but additional work: no extra pay. (Laughter.)

The resolutions were then put and carried with but one dissentient.*

* It was stated in the course of a conversation that the expense if spread over thirty years, would be about 1¼d. per house per annum.

## Miscellanea.

PROJECTED WORKS.—Advertisements have been issued for tenders, by 7th June, for repairs, alterations, and repewing, at the parish church of Frisby, Leicestershire; by 22nd June, for alterations and additions to the Kent County Prisons; by 6th June, for the erection of carcass of dwelling-house, and for building and finishing warehouse, factory, and other premises, at Haggerstone; by a date not specified, for building and finishing houses at Southampton; by 6th June, for erection of schools and master's house at Southampton; by 9th June, for the erection of an Odd Fellows' Literary Institution at Birmingham; by 2nd June, for certain works at the Halsted Union Workhouse; by 7th June, for the erection of booking-offices, &c., at Leeds station; by 8th June, for supply of various paving materials for St. Giles-in-the-fields and St. George, Bloomsbury; by 9th June, for paving in St. Ann's, West; by 30th inst., for lighting the City with gas; by 7th June, for laying down water-pipes in Southampton; also by 2nd June, for a survey plan and valuation of Houghton Regis parish.

MEETING OF THE ARCHÆOLOGICAL INSTITUTE, LINCOLN.—The members of this society have arranged to hold their next meeting in the city of Lincoln, in the week beginning Tuesday the 25th of July. There will be three sections, at which papers will be read on architecture, history, and antiquities. Excursions will be made to Southwell, Tattershall, and other places. Professor Willis will give a lecture on the minster. Papers will also be read, among others, on the Roman remains of Lincoln, the castle, the palace. The Council of the Institute has solicited the exhibition of the regalia, and access to the antiquarian section of the ancient documents of the corporation. The Town Council resolved to afford all possible facilities, enabling the institute to carry out their objects. A writer in the *Lincolnshire Times*, who signs himself "A Visitor," has been finding fault with the buildings last erected in this city. He says,—"I think Lincoln has lost the art of classic building. My attention was first attracted to a new building, which I was informed was the 'New Corn Exchange.' Had it been a money change, I should have wished that not only the tables of the money-changers were overthrown, but the change itself. I felt no inclination to inquire the names of your several architects, as, by the specimens, posterity will not require them. The building is disproportionate, of no known order, and out of the square; it has large pillars in front, with no corresponding capital; the entrance is more adapted for a solemn mosque than for commercial resort; the arches are narrowed within the proportion of height. The Exchange itself would do for a republic of bees, where humming is the language; for, either from the want of attention, or of knowledge of the science of acoustics, the vibration and echo were so striking to me, that a speaker would have to gulp his own words—they could never reach the auditory at any distance. I proceeded to the new hotel intended for the Great Northern Railway. On an external view, it was apparent that the ingenuity of the architect has been taxed to make a large good building out of a bad small one. I will give him credit for the endeavour, but I cannot compliment him on his success. The entrance door is out of all proportion; it is small and insignificant. The interior I did not see; but, from the exterior, I could form an opinion, which was highly favourable for public accommodation. On returning to 'mine inn,' I had opportunity sufficient to examine the building, but lately erected. The same faults were as visible in this as in the other buildings. The architect evidently shadowed forth on his 'card board' an Elizabethan building, but he has not fully carried it out; consequently, the intended effects are defects." As we shall probably take a peep at the doings of the "institute" in the ancient city, we shall be able to confirm or contradict this censure.

THE WESTERN LITERARY INSTITUTION.—Mr. J. S. Buckingham has commenced a course of lectures here on Italy and the Italians. The lectures of June 1 and 8 will treat of the ancient and modern buildings of Rome.

COMPETITIONS.—Advertisements have been issued for plans, &c., for a new workhouse in the Erpingham Union, for 500 persons: premium offered, 50*l.* or a commission;—also for designs and estimates for the erection of a church and schools in the Marsh, Stratford, Essex: no terms specified;—also for a plan and estimate for building thirty cottages at Chertsey.

THE SHOP-BLIND NUISANCE.—A Dudley 'six-feet' correspondent of the *Birmingham Journal* indignantly complains of a local nuisance, such as that already no less indignantly denounced in THE BUILDER as a metropolitan one—that is, the shop window-blind, or awning-tackle nuisance. "Is it to be endured," he asks, "that while in the very act of returning with studied elegance the salute of some fair friend, your "chapeau" shall be dashed from your apex into the kennel by some infernal machine fixed in mid air? a machine evidently originated by some fiend of a shopkeeper for the express purpose of malicious annoyance to pedestrians." We cannot but sympathise with the Dudleyite, seeing that we have suffered but too often under a like infliction, not exactly such as he may have met with, while, 'with his beaver up,' in the pride of one of those studied flourishes of elegance which occasionally, we must admit, deserve to meet with so summary a downfall from the sublime to the ridiculous, but, on the contrary, while with much more staid, if not more studied manner, threading our way through a metropolitan thoroughfare. We had even determined on a public-spirited, but probably Quixotic crusade against these worse than windmills, in the Strand, the other day; but confess we were, *pro tem.* at least, seduced from our valiant purpose by a highly satisfactory solatium on the majesty of our person, administered, by way of "soft sawder," by a graceful Dulcinea del Strandoso, who pleaded guilty to the not very 'soft' impeachment of elevating one of these levelling engines a reef or two too low, at least for our 'elevation' above the pavement, in front of her 'emporium.'

ORDNANCE SURVEY.—On Monday some returns connected with the Ordnance survey were printed. A list is given of the towns in Ireland surveyed, on the scale of 60 inches to a mile. The surveys were not made for the purpose of sanitary improvement. They were commenced in 1830 and finished in 1843: the expense was 863,206*l.* It appears that the area of Ireland is 20,875,482 acres. In Great Britain it appears that Southampton and Windsor only have been surveyed for sanitary purposes. The cost of the preparation for Southampton was 1,240*l.* 12s.,—the area was 3,356 acres;—whilst, for Windsor, it was 331*l.* 17s. 9d.; the plan embracing an area of 1,212 acres.

ART IN PARIS.—A commission of reform, composed of artists, has been instituted in Paris, to examine into the constitution and condition of the school of fine arts there and those of the Academy at Rome, and to propose measures for their improvement. Some curious hoards of objects of art of various kinds have been discovered in the Louvre, and a commission has been appointed to examine them. ——The competition for the symbol of the Republic, consisting of five hundred designs, is said to be a failure. The collection contains few designs of any merit.

COMPOUND IRON BEAMS OR GIRDERS.—In a specification, enrolled May 9, 1848, of the patent of Mr. Henry Fielder, Maida Vale, it is stated that the lower or tension flanges are made wholly or partly of malleable iron, while the centre ribs and upper or crushing flanges are wholly or partly of cast iron, according to the duties they may have to perform. The malleable iron is united to the cast iron by hot riveting, and in all cases in such proportion that it shall be able to support, alone, the estimated weight to which the whole girder may be subjected, and so prove efficient in case of fracture of the cast-iron portion. The specification also comprehends the application of the principle to the strengthening or repairing of existing beams or girders, and to the construction of beams or girders composed entirely of malleable iron, in which case the flanges are united to the centre rib by angle iron, the coupling joints headed, and the whole fastened together by hot riveting.

ARMSTRONG'S HYDRAULIC ENGINES.—We are glad to perceive, from accounts forwarded to us from Liverpool and Newcastle, that the ingenious invention of Messrs. W. G. Armstrong and Co., of Newcastle,* already noticed in our columns, is in course of multiplication, especially at Liverpool, as a power adapted to use for warehouse and ship cranes,—a subject of the utmost importance to that and every other port, for the economization of manual labour. The moving power at Liverpool is the pressure of the water supplied from the mains of the Green-lane water-works, whereby a couple of tons of goods can now be hoisted in a few seconds to the highest floor of a building almost without human aid at all. It is said to work with great precision and delicacy. Our confident prognostications of the immense diffusion of such a power for various purposes, long since published in THE BUILDER, are thus in course of fulfilment. A modification of the same principle, approximating closely to the steam-engine, has been recently put in operation at Newcastle, where, as we have already noticed, quay cranes have been for some time in use. The *Newcastle Journal*, in describing this new engine says, "Certain it is that all impediments to the attainment of high speed and easy motion are removed in this engine, and there appears to be every probability of its coming into extensive use, not only in cases where steam-engines are considered objectionable, but, also, for many purposes where it will be found more economical than steam, and in others where it will be applied in substitution of manual labour. We congratulate Messrs. W. G. Armstrong and Co. on the production of this engine, which is novel and ingenious in design and beautiful in workmanship." It is worked without waste of water at all by means of slide valves opening into pistons acted on through two separate pipes, "by the pressure of the Carr's Hill water on the one side, and by the opposing pressure of the Gallowgate water on the other, the engines being consequently put in motion by a force equal to the difference between the two pressures [82 lbs. on the square inch]. By this means the water, instead of being run to waste, merely passes from one set of pipes to the other, and remains available for the use of the town."

LINEN FIRED BY SOLAR HEAT.—In the case of a fire which occurred on Monday week, in a warehouse at St. Paul's Churchyard, Mr. Braidwood reports to the insurance offices that the cause of it was the firing of a linen curtain first at the open part of a window. It seems doubtful, however, whether by "the open part" of the window he means that the sash was open, or merely that the fire originated by the solar action through the glass where exposed openly to the solar ray. The heat was lately, it is said, 21 degrees above the average of the same time of the year for twenty-five years past; but the firing of linen by the unconcentrated rays of an English sun in May, would be a phenomenon likely to startle the linen-clad denizens of the tropical south.

DISCHARGE OF WORKMEN WITHOUT NOTICE.—At Bedlington, lately, it was decided in court that a notice posted up by employers to the effect that every workman was to give three weeks' notice previous to leaving his employment, implied a like understanding on the part of the masters towards the workmen, and the bench decided accordingly, except in cases where it was proved that the men had on several occasions quitted work to speak to others,—in fact, to advise them to strike for higher wages, the real reason of their summary dismissal.

BRITISH GLASS.—In an official document presented to Parliament, and lately printed, it is stated that the quantities of British glass exported in the year ending the 5th January last, were as follows:—Flint glass, 17,858 cwt.; window glass, 29,804 cwt.; plate glass, 41,879 superficial feet; common glass bottles, 227,844.

AN ARCHÆOLOGICAL SOCIETY has been formed in Scarborough. The objects of the society are to promote antiquarian research in the neighbourhood, and to illustrate and make interesting the history of ages past, by those memorials of them which have been or may be found.

* Are these the gentlemen who discovered the singular principle of "Armstrong's hydro-electric boiler," first announced from the vicinity of Newcastle?

WINCHFIELD CHURCH, HANTS.—This is a very interesting structure of the Norman period, and is well worthy of a passing visit. The tower is 25 feet square at the base, but the upper part is modern, apparently built after a portion of the original had fallen down. The western doorway is a good example, with columns and zig-zag decorations; and the arches between the tower and nave internally, and the nave and chancel, are beautiful, especially the latter. The windows in the chancel are enriched internally with the zig-zag ornament. On the northern side are the remains of an Early English doorway, and at the eastern end there is a triple lancet window. Perhaps the most interesting part of the building to an antiquary would be the curious rude paintings on the outside of the tower. The old part of the tower has been plastered over, and on the upper portion of it is painted a scallop running round the tower, and on the west front above that are represented dragons crossing their forked tongues in the centre: these dragons seem to be issuing out of other dragons, and underneath appear to be the figures of human beings. An external decoration of this sort is rare. The pulpit bears the date of 1634.

FOR THE PRESERVATION of WOOD, a patent has been taken out in France by MM. Hutin and Boutigny, the principle of which consists in the assimilation of the antiseptic substance with the vegetable itself, in place of impregnation with corrosive sublimate, or the chlorides of zinc, calcium, iron, &c., which have been found, it is said, to tear the woody fibre asunder by the irresistable force of crystalization. On the new principle, nothing more is necessary than simply to immerse the ends of each piece to be preserved in any of the hydro-carbons—such as the oil of schist, and set on fire the ends of the pieces thus treated, letting them burn until all the applied hydro-carbon is burned out—when they must be immediately dipped into a hot mixture of pitch, tar, and shellac, and may then be painted, tarred, &c. M. Gemini, in a paper read to the Paris Academy, testifies to the destruction of fibres by the usual processes, and recommends tar, creosote, naphtha, or any of the highly-bituminized articles, easily and economically obtained.

STONEHOUSE MECHANICS' INSTITUTE COMPETITION.—We understand, with respect to the competition for the Stonehouse Mechanics' Institute, that, at a special meeting of the committee, held on the 9th inst., to receive the report of the sub-committee appointed to investigate the plans submitted by architects, a design was adopted, which was afterwards found to be by Messrs. Fuller and Gingell of Bristol. There were about twenty designs sent in.

CHRIST CHURCH, EAST GREENWICH.—Last week a supper was given by the committee for erecting Christ Church, East Greenwich (Messrs. Brown and Kerr architects) to all the parties employed upon it, on the occasion of the roof being covered in. About 70 persons sat down. These kindly gatherings have a good effect; they make all parties feel personally interested in the success of the work.

NAIL MAKING.—We are told this branch of trade is likely soon to receive a strong impetus by the operations of the British and Foreign Patent Nail Company, who are about to commence their works. It is said that the nails manufactured by the machinery are of a first-class description, though produced at an expense which will enable them to be sold at a lower price than is paid for the most common cut nails. It seems that the whole nail—head, body, and point—is made at the same time, and simply by one operation of the machine.

IRON PIPES CAST IN TRUE CONCENTRIC CYLINDERS.—The patented invention by Mr. D. Y. Stewart, of Montrose, now of Glasgow, described in THE BUILDER, Vol. V., page 522, has been favourably reported on by Professor Miller, of the Philosophical Society, Glasgow, and Mr. P. Wilson, head master of the Western Collegiate Institution there.

ARCHITECTURAL CONVERSAZIONE.—Mr. S. Angell, late Vice-President of the Institute of Architects, received the members of that body, and many persons eminent in art and science, on Thursday evening, at his house, in Gower-street.

Tranquillizing Effect of Pictures.—Every good picture, by which I mean every picture that has something good in it, is not mere surface and colour; it has a countenance, like the countenance of a friend or lover, of which certain expressions are revealed only to certain eyes at certain moments. Then there are the associations of long acquaintance; accidental gleams of lamp or sunshine have lighted up the shadowy nooks, and startled the eye with revelations of hidden beauty and meaning: or, in hours of lassitude and sorrow, hours when the "fretful stir unprofitable" of this painful actual world, has hung heavy on the spirit, the light breaking from behind the trees of far-off distance, stretching away, and leading the fancy after it, till it melts into Elysium; or rural groups, revels of satyrs, or clouds, or face of pure-eyed virgin or serene saint, has arrested the troubled course of thought and stamped a consecration on certain pictures which it would be a pleasure to see commemorated, but which no accidental visitor can enter into. "I cannot express to you," said a most distinguished statesman of the present day, as we stood in the midst of his beautiful pictures, I "cannot express to you my feelings of tranquillity, of restoration, with which, in an interval of harassing official business, I look round me here." And while he spoke in the slow quiet tone of a weary man, he turned his eyes on a forest scene of Ruysdael, and gazed on it for a minure or two in silence—a silence I was careful not to break—as if its cool dewy verdure, its deep seclusions, its transparant waters stealing through the glade, had sent refreshment into his very soul.—*Mrs. Johnson's Companion to Picture Galleries of London.*

Illusive Imitations in Art.—Mengs says justly, "all the refinement of the art consists in selecting the beautiful and the necessary, and in leaving out the superfluous and the minute." But we should remember, however, that in proportion as the work becomes refined and abstract, it will have fewer admirers; while the pleasure afforded by illusive imitation, even when employed on the most ordinary subjects, mere transcripts of still-life, will always render that property of our art the most generally attractive: all are in some degree judges of it; the cobbler, in his own line, may triumph in criticising Apelles; and for this reason, the judicious artist, even in his loftiest flights of imagination, or highest attempts at expression, will endeavour to introduce some portion of those qualities which are intelligible and agreeable to all, as a passport for those of a more intellectual character, which will ever be confined to the few.—*H. Howard's Lectures.*

## TENDERS.

Delivered for the erection of a new Grammar School and Master's House, at the Litten, Newbury:—

| | |
|---|---|
| Woodman | £1,459 0 0 |
| Hansom | 1,274 0 0 |
| Harrison | 1,268 0 0 |
| Salisbury | 1,195 10 0 |
| Adey | 1,153 0 0 |
| Dredge | 1,070 0 0 |
| Stratton (accepted) | 919 0 0 |

## MEETINGS OF SCIENTIFIC BODIES

*Held during the ensuing week.*

Monday, May 29.—Institute of Architects, 8 p.m.
Tuesday, 30.—Institution of Civil Engineers, 8 p.m.
Wednesday, 31.—Society of Arts, 8 p.m.
Thursday, June 1.—Society of Antiquaries, 8 p.m.
Friday, 2.—Archæological Institute, 4 p.m.

## TO CORRESPONDENTS.

"*J. C.*" would find Mr. P. we believe at Blackwall Railway office. As to first question, value of land differs so greatly, we can give no answer.

"*G. H. S.*" was overlooked. The position of string-courses is very various. The stone corbels were probably intended to carry the main timbers of aisle roof.

"*T. O.*"—Do not quit a certainty for an uncertainty.

"*C. B.*"—If the drawings are left for us, in confidence, they shall be safely returned.

"*A. B. D.*"—The Portland Cement would answer his purpose.

"*Covent Garden Surveyor of Pavements.*"—Five communications on this subject since our last, shew how strongly the late election is objected to.

"*R. K.*"—Excuse our silence.

*Received.*—"Archi" (shall be inquired into); "D. C.," Sheffield, and "G. H.," Birmingham (will find what they want advertised); "D. C." (we hope to engrave the view); "G. C. W." (what is there to ensure the return of the vulcanized rubber into its proper place?); "A Citizen," "J. R." (has been attended to, we understand); "S. S." (thanks, though we cannot find space for the lines); "E. A.," "A Real Surveyor," "Rate Payer," "T. M.," "J. W.," "P. S.," "Architectural Student," "Michael Angelo," "Yorks," "J. P." (next week).

"*Books, Prices, and Addresses.*"—We have not time to point out books or find addresses.


## ADVERTISEMENTS.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

**H. MORRELL, BLACK LEAD PENCIL MANUFACTURER,** No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

| | |
|---|---|
| H H H H for drawing on wood. | F F light and shading. |
| H H H for architectural use. | F for general use. |
| H H for engineering. | B black for shading. |
| H for sketching. | B B ditto ditto. |
| H B hard and black for drawing. | B B B ditto ditto. |
| M medium. | B B B B ditto ditto. |

Sold by all the principal Stationers in town or country.

By Her Majesty's Royal Letters Patent.

**DE LA FONS' PATENT ROTATORY** LOCKS, BOLTS, LATCHES, WINDOW and other FASTENINGS, also applicable to Railway and other Carriages. Sole Manufacturer, BENJAMIN BARLOW, 55, Bread-street, Birmingham, and 120, Long Acre, London.

By Her Majesty's Royal Letters Patent.

BAILLIE'S PATENT ROUNDED RIM LOCKS, WITH SECRET AND SECURE FIXINGS.

**THIS CHEAP and USEFUL ARTICLE** obviating the unsightly appearance and insecurity of the common rim lock, can be obtained from the Manufacturers, Messrs. CARPENTER and TILDESLEY, Willenhall; or from the sole Agent, Mr. JOHN FAULKNER, Ironmonger, 61, St. Martin's-le-Grand, London, opposite the new Money-Order Office.

CAST-IRON PIPES, IRON WORK FOR OVENS, &c.

**RAIN PIPES, &c.—F. A. TIDDEMAN,** Purfleet Wharf, Earl-street, City, near Blackfriars-bridge, keeps a large stock of Rain Pipes, Heads, Shoes, Elbows, &c., half round and O. G. Gutters, Socket Pipes for Water or Gas, Flanch Pipes, Sash Weights, and other Castings; Iron Work for Baker's Ovens of every description, fitted complete, to be had in sets or in parts.—Prices equal to all competition. Contracts taken to any extent.

**RAIN-WATER PIPES,** Heads, Shoes, and Elbows, Half-round and O G Gutters, Sash Weights, Railing Bars, Sink and Stable Traps and Gratings, Air Bricks, Coal Plates, &c.; Gas and Water Pipes from 1½ inch. to 12 in. in diameter, with Heads, Branches, Syphons, and Lamp Columns: also Hot-water Pipes, with all the usual connections. A large Stock of the above Castings at JONES'S Iron Bridge Wharf, No. 6, Bankside, Southwark.

TO ARCHITECTS, BUILDERS, AND BRICK-MAKERS.

**PUMPS of Superior CONSTRUCTION,** bored perfectly true by improved machinery, in various plain and ornamental patterns for Conservatories, Squares, Market Places, Roads, Gardens, and for Liquid Manure. BRICK-MAKERS' PUMPS, in Wrought and Cast Iron, HYDRAULIC LIFT PUMPS, and ENGINES for Wells of any depth. SINGLE and DOUBLE PUMPS up to twelve-inch bore, kept for Hire.

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**THE PATENT VULCANIZED INDIA-RUBBER HOSE-PIPES** are made to stand hot liquor, and acids without injury—do not become hard or stiff in any temperature (but are always perfectly flexible) and as they require no application of oil or dressing, are particularly well adapted for locomotive engines, railway cranes, fire engines, pumps, gas, beer engines, gardens, and all purposes where a perfectly flexible pipe is required. Made all sizes, from ¼ inch bore upwards, and of any length to order. Vulcanized India rubber garden hose fitted with brass-taps, copper branch and roses complete, ready to be attached to pumps, water-butts, or cisterns. Sole manufacturer, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

N.B. Vulcanized India rubber washers of all sizes for joints of hot-water and steam pipes, and vulcanized sheet rubber any thickness for all kinds of joints, and other purposes.

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**PEAKE'S TERRO-METALLIC TILES,** PIPES, &c., of at least 100 sorts and sizes. In addition to the numerous purposes to which it is applied already, this Material may be moulded into a great variety of articles required either at home or abroad by the Nobility, Clergy, Gentry, Architects, Civil Engineers, and Builders; also by Owners and Occupiers generally of Land, Mines, Railways, Buildings, Gardens, and other property. See advertisement, with figures, in "The Builder" of the 2nd, 16th, and 30th October and 13th November, 1847, also 1st January, 1848. Lists are ready, containing prices, both per number and also per square, per yard, per foot, &c.—Applicants would oblige by stating if they want the prices in Staffordshire or London.—Address 4, Wharf, Macclesfield-street South, City-road Basin.

TO BRICK AND TILE MAKERS.

**THE AINSLIE BRICK and TILE MACHINE COMPANY** (James Smith, Esq., of Deanston, Chairman) invite attention to their improved Brick and Tile Machines, which are to be seen at work at Alperton, and at the Company's office, 103A, Piccadilly, from Ten a.m. to Five p.m. Mr. Robert Scrivener, who has been appointed manager in the room of Mr. John Ainslie, will shew the machines at the works at Alperton, which is within a mile of the Sudbury station of the London and North-Western Railway, and two miles of the Ealing station of the Great Western Railway; also at the Polytechnic Institution, Regent-street, London.—All communications to be addressed to Mr. WILLIAM GORDON, Secretary, at the office of the Company, London, 103A, Piccadilly.—March 1, 1847. These machines may also be seen at Mr. Slight's, Leith-walk, Edinburgh; Mr. Robert Boyle's, Ayr; Mr. Lawrence Hill's, 135, Buchanan-street, Glasgow; Mr. Robert Charles', Mill-hill, Leeds; Messrs. Penny and Finch's Penkridge, Staffordshire; Messrs. Drummond and Son's, Dublin; and Mr. John Connor, Newton Lindvady, County Derry.

**JACKSON'S PAPIER MACHE and** CARTON PIERRE. Enrichments executed in the first style, at their Establishment, 49 and 50, Rathbone place.

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**TO GAS COMPANIES, Gas Fitters, and** Gas Consumers.—N. DEFRIES, 10, Hampstead-road, 67, St. Martin's-lane, and 118, Argyle-street, Glasgow, having proved by eight years' experience his DRY METER to be unrivalled, begs to say, that nearly 20,000 are now in use, defying injurious Gas, and are never affected by Heat, Damp, or Frost. They may be obtained on Hire of all the Gas Companies who supply Meters to their Customers.—Testimonials of great value may be obtained at either Factory.

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**BURBIDGE and HEALY,** 130, FLEET-STREET, LONDON, beg respectfully to inform the Building Public that they fit up COOKING ARRANGEMENTS for large Mansions, with patent appliances on scientific principles, which ensure greater economy and efficiency than hitherto attained. Also HOT WATER APPARATUS, upon improved and scientific principles, which they recommend for its peculiar safety for the Warming of Mansions, &c.

They fit up Laundries with Hot Water Apparatus, for Drying in a cleanly, expeditious, and safe manner. They also fit up BATHS with elegant arrangements, with every modern scientific improvement. Also Apparatus for the plentiful supply of Hot Water for Baths and general use of Mansions and large establishments.

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**THE BRITISH and FOREIGN** HEATING and VENTILATING COMPANY beg to call the public attention to their HEATING APPARATUS, patented by Mr. ROBERT HAZARD, which has now been tested in public and private Buildings, Churches, Mansions, Conservatories, Forcing-houses, Offices, Factories, &c.; establishing a character for safety, economy, and cleanliness, possessed by no other invention of the kind.

A Pamphlet descriptive of the principle, with testimonials and list of buildings warmed, sent post-free on the receipt of four postage stamps at the Company's Works, Bristol; the London Office, 14, Lincoln's-inn-fields; or Lyme-street, Liverpool.

Application for the purchase of Licences under the Patent to be made to the Company's Solicitor, H. COWLARD, Esq., 14, Lincoln's-inn-fields, London.

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| 5d. | 6d. | 8d. | 11d. | 1s. 4d. | 1s. 10d. per 1,000. |
|---|---|---|---|---|---|
| 3d. | 4d. | 6d. | 8d. | 10d. | 20d. |

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| 4s. 3d. | 5s. | 6s. 6d. | 7s. 6d. | 10s. | 13s. per gross. |
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| 3 ft. | 3 ft. 3 in. | 3 ft. 6 in. | 3 ft. 9 in. | 4 ft. |
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| £3. 6s. | £3. 13s. | £3. 16s. | £4. | £4. 10s. |

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Do. Elliptic do., at 3½d., and 4d. do.

Manufacturer of WOLFASTON'S PATENT REGISTER STOVES, a certain cure for SMOKY CHIMNEYS, and effecting a great saving in fuel. To be seen in use daily.

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**ATKINSON'S CEMENT.—WILLIAM** WOOD, Jun., Manufacturer of Roman, Portland, and Bath Cement, Blue Lias Lime Works, CHURCH STREET, ROTHERHITHE, Sole Consignee for Atkinson's Cement.—Grey Stone Lime Depôt. Cement Chimney-pots of every pattern.

**KEENE'S PATENT MARBLE CEMENT** forms an exceedingly hard and indestructible Stucco, which may either be prepared for paint, or finished in imitation of stone, by the addition of Portland or other stone dust.

It is a cheap and efficient substitute in place of wood for skirting, architrave, and other mouldings, in its application for which purposes it checks the progress of Fire and the attacks of Vermin.

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**PORTLAND CEMENT,** solely Manufactured by W. ASPDIN, Son of the Patentee. This Cement has been proved, for upwards of twenty years in the Thames Tunnel, to resist the action of water; it is stronger in its cementitious qualities, harder, and more durable than any other description of Cement; it does not vegetate, oxydate, or turn green; nor is it affected by any atmospheric influence whatever, the climate resisting alike the action of frost and heat. It is manufactured to set in from five to sixty minutes. For all purposes that Cement is applicable the Proprietors challenge competition.—Orders received by Messrs. ROBINS, ASPDIN, and Company, at their Manufactory Northfleet, Kent, and their Wharf, Great Scotland-yard, Whitehall

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1. It rapidly acquires the hardness of stone.
2. Unlike other internal cements, its hardness is uniform throughout its entire thickness.
3. Its surface (which may be made equal to that of the finest marble) NEVER THROWS OUT ANY SALT, and will receive paint in four days, without peeling, when put upon dry work.

It is peculiarly adapted as an internal stucco for walls, skirtings, architraves, mouldings, and enrichments of all kinds, to all of which purposes it has been extensively applied by Mr. Thomas Cubitt, on the Grosvenor estate, &c.

For the above purposes, it possesses great advantages over woods, being more economical and durable, resisting fire, damp, and vermin.

For the floors of halls and fire-proof warehouses, its lightness, durability, and uniform surface give it an immense advantage over stone, being, at the same time, much more economical. The most satisfactory references can be given. To be had of the Patentees, Plaster of Paris and Cement Manufacturers, 186, DRURY LANE.

Agent for Liverpool and Manchester, Mr. R. PART, 98, Canning-place, Liverpool.

**BOARD'S PORTLAND, BATH, and** IMPROVED ROMAN CEMENT, Dunball, near Bridgwater.—The Proprietor of these Works begs to inform the public that he is now enabled to supply them with an unlimited quantity of the above Cements, and that the Bath and Portland will be found to resemble these celebrated stones both in colour and durability. They are recommended as being superior to all others, for the following reasons:—Being made of Inland Stone (and not dredged from the sea as stone for Roman is), they are not impregnated with salt, therefore never vegetate or turn green (a fault so generally complained of with Roman), they take a much larger quantity of sand than other Cement, never crack, blister, or peel off, and will be found even preferable to stone. They are perfectly Hydraulic, and will set under water in a few minutes; as an external Stucco they are impervious to all kinds of water, and not affected by frost or heat; they improve both in texture and durability, and require neither paint nor colour to make them resemble the best Bath and Portland stone, no other mixture being required than common sand. When used as an internal Stucco for walls, staircases, passages, &c., the Bath and Portland Cements may (if required) be trowelled up to a face almost equal to marble, or may be painted or papered on in a few days. The IMPROVED ROMAN CEMENT is made of the same kind of material, and will be found to possess all the qualities of Bath and Portland (except that of colour); it is cheaper, and in every respect better, than any previously offered to the public, and only requires one trial to be appreciated.

A stock of those Cements, as well as Blue Lias Lime ground for concrete, always on hand, which may be had at BOARD'S Depot Stone-yard, Paddington Station, and of the following Agents—viz., Mr. R. Croft, Surrey-street, Kent-square, Liverpool; Mr. Baker, 78, Digbeth, Birmingham; Mr. Furze, Hotwells-road, Bristol; Messrs. Tothill and Co., Temple Bucks, Bristol; Mr. W. Davey, Quay, Bath; Mr. Grimsby, Oxford; Messrs. Clarkes, Reading; Mr. Thos. George, Windsor; Mr. Hurniman, Taunton; Mr. Tuckett, Exeter; Messrs. Browne's and Co., Bridgwater; Messrs. Southam and Evans, Gloucester.

**EMERSON'S PATENT CEMENT PAINT.** —This VALUABLE AND ECONOMIC PAINT is ready for use, is simple in its application, and only ONE-SIXTH the cost of oil paint; for beauty it is pre-eminent over all other materials used on the fronts of houses, giving the exact appearance of FINE CUT PORTLAND OR OTHER STONE; it can be used at once on fresh Roman cement or other plastering, and is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be at once beautified in any weather, at a mere trifling cost.—Sold in casks of 1 and 2 cwt., at 8s. and 15s. each.

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A brilliant black paint, invaluable as a coating for SHIPS SIDES AND BOTTOMS; also for all kinds of WOOD or METAL work, or the asphalte roofing felts, leaky roofs, spouts, and gutters, doors, sheds, railing, and all kinds of out-door work, and being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay,—requires no preparation, and will dry in a few hours.—Price 2s. per gallon.

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A large supply of the best quality, direct from the Manufactory, at low prices, for home use and exportation.

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## LONDON AND MANCHESTER GLASS COMPANY,

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MANUFACTORY—SUTTON, NEAR ST. HELEN'S.

PRICES OF SUPERIOR POLISHED GLAZING PLATES.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 ..... | 0 | 3 | 4 | 10 ..... | 2 | 10 | 0 | 19 ..... | 6 | 13 | 8 | 28 ..... | 12 | 12 | 5 |
| 2 ..... | 0 | 8 | 2 | 11 ..... | 2 | 18 | 5 | 20 ..... | 7 | 11 | 4 | 29 ..... | 13 | 7 | 7 |
| 3 ..... | 0 | 12 | 6 | 12 ..... | 3 | 8 | 0 | 21 ..... | 8 | 3 | 5 | 30 ..... | 14 | 2 | 0 |
| 4 ..... | 0 | 17 | 6 | 13 ..... | 3 | 17 | 1 | 22 ..... | 8 | 11 | 5 | 31 ..... | 14 | 17 | 8 |
| 5 ..... | 1 | 2 | 6 | 14 ..... | 4 | 6 | 11 | 23 ..... | 9 | 4 | 0 | 32 ..... | 15 | 13 | 10 |
| 6 ..... | 1 | 7 | 6 | 15 ..... | 4 | 17 | 8 | 24 ..... | 9 | 16 | 10 | 33 ..... | 16 | 6 | 10 |
| 7 ..... | 1 | 13 | 1 | 16 ..... | 5 | 8 | 6 | 25 ..... | 10 | 10 | 8 | 34 ..... | 17 | 2 | 6 |
| 8 ..... | 2 | 0 | 0 | 17 ..... | 5 | 18 | 10 | 26 ..... | 11 | 4 | 5 | 35 ..... | 18 | 0 | 0 |
| 9 ..... | 2 | 5 | 0 | 18 ..... | 6 | 7 | 7 | 27 ..... | 11 | 19 | 4 | 36 ..... | 18 | 16 | 3 |

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ROUGH PLATE, suitable for Railway Stations, Warehouses, Skylights, Floors, and other Building purposes, of every thickness, at very moderate prices.

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Every further information may be obtained upon application to J. L. GRUNDY, Company's Agent.

12, Rathbone-place, London, 13th April, 1848.

## SEYSSEL ASPHALTE COMPANY.

CLARIDGE'S PATENT.

Established March, 1838, for working the Mineral Asphalte Rock of Pyrimont Seyssel, a Bituminous Rock, situate on the Eastern side of the Jura.

Principal Depôts, ROUEN, MARSEILLES, and STANGATE, Surrey side of Westminster-bridge, London.

**THE ASPHALTE of SEYSSEL** has been extensively used since March, 1838, for the following useful purposes:—

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| Foot Pavements. | Dog-kennels. | Covering of Railroad and other Arches. |
| Kitchen Floors (particularly where it is essential to keep damps from rising). | Barn Floors. | The only effectual mode to prevent the percolation of water, which also renders it very appropriate for the Lining of Tanks, Fish-ponds, &c. &c. |
| Garden Walks and Terraces. | Granaries. | |
| Carriage Drives. | Tun-room Floors. | |
| Coach-houses and Stabling. | Malt-house Floors. | |
| | Piggeries, &c. &c. | |

The attention of RAILWAY ENGINEERS, ARCHITECTS, and CONTRACTORS is particularly directed to the great advantage to be derived from the application of SEYSSEL ASPHALTE.

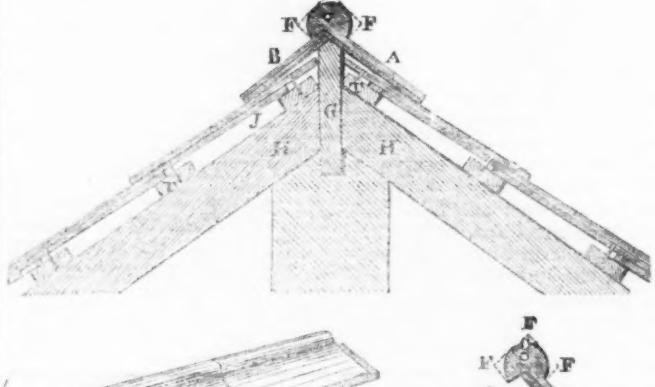
The arrangements of the SEYSSEL ASPHALTE COMPANY, CLARIDGE'S PATENT, enable it to execute Works of any extent with the greatest promptitude.

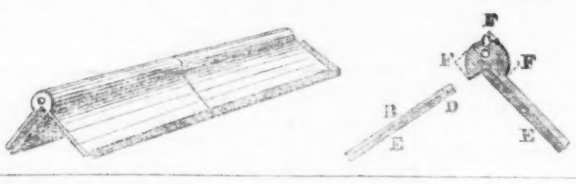
In order to guard against the use of spurious materials, it is important that all applications for Works to be executed, be made direct to this Company; and as a further protection, it is suggested that Engineers, Architects, and Contractors should require a CERTIFICATE from the Company that the proper description of material has been used.

Information may be obtained as to all Works which have been executed by the Company since its establishment in 1838, which will prove that the failure of many Works represented to have been done with the genuine material, has resulted from the substitution of a spurious one.

I. FARRELL, Secretary,
Seyssel Asphalte Company, Stangate, London.

## WILLIAMS'S PATENT SLATE RIDGES AND HIPS.




THE above article is recommended as the best and the most suitable covering for Ridges and Hips of slated roofs ever invented, possessing a solid Roll of various sizes, more elegant and durable than lead, and 30 per cent. cheaper.

Sold by Messrs. J. and J. SHARP, Slate Merchants, Tooley-street, and Mr. RICHARD COOPER, Slate Merchant, Belvidere-road Lambeth, London.

## DEANE, DRAY, AND DEANE'S PATENT CESSPOOL AND TANK CLEANSER.

BY DEANE, DRAY, and DEANE'S PATENT CART or WAGGON, a Cesspool can be emptied in a remarkably short space of time, and without smell or dirt; and their simplicity and cleanliness while in action is such, that they may be used as well by day as by night. The flexible hose may be taken through any length of passage, &c., to a reservoir that might be otherwise impossible, or left uncleansed, on account of the difficulty of getting at it.

Cesspools thus left cause much unhealthiness, especially where many of them are confined in the limits of a small neighbourhood. See Mr. Ellerman's "Letter to Lord Morpeth on Sanitary Reform and Agricultural Improvement, or how to promote health and abundance."—See also "Mechanics' Magazine," February 12, 1848.

MANUFACTORY—SUTTON, NEAR ST. HELEN'S.

The directions for use are as simple as the machinery is effective: insert the nozel into the semi-fluid matter to be lifted: then set the Air-pump to work; the pressure of the atmosphere will immediately cause the matter to ascend the pipe, and fall into the cart.

AGRICULTURAL IMPLEMENT DEPOT, NEAR THE MONUMENT, LONDON-BRIDGE.